The Journal of the
American Medical Association

VOL. XXXIV CHICAGO, ILLINOIS, FEBRUARY 3, 1900. No. 4.

Address.

THE CODE OF ETHICS.*

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Ethics may be defined to be the adjustment of acts to ends. In medicine the acts relate, for the most part, to conduct, impliedly, good conduct, which "gains in ethical sanction" in proportion as the "activities do not necessitate mutual injury and hindrance" . . . "but consist with and are furthered by co-operation and mutual aid."

In a homogeneous citizenship the evolution of conduct proceeds with the development of Christian civilization, and by common consent, becomes the type of moral standard which will unify the adjustment of acts to the attainment of a common purpose among the component constituency of any avocation in civilized life.

There is no occupation or trade without rules of conduct, either written or unwritten, which are either good or bad as the ends to be obtained rise or fall in the scale of morality and good citizenship. A man may inherit or acquire the qualities of a gentleman. He need not be a Chesterfield in manners, nor a monk in the abstemious dicipline of self-denial, but he can be a gentleman only by virtue of the adjustment of his acts to the aims of good conduct in the activities of human life. As with individuals, so with classes and communities.

The popular contention that gentlemen do not need a formulated system of ethics for their guidance is flatly contradicted by the history of every ecclesiastical and parliamentary body, social club, business organization, scientific society, and the unwritten *esprit de corps* of numerous classes of educated and cultivated people. In fact, in many instances, the unwritten ceremonial requirements of classes and of society in general are more rigorous and less tolerant than those of formulated systems of ethics. The inherent right of private judgment can not be protected, either in public or private life, without the restraint of accepted authority. Two persons may differ in opinion, on any debatable question, but neither has the right to push the difference to physical collision or sink it to the grade of moral turpitude.

In small populations, as with occupations with limited constituencies, the evolution of good conduct develops along the line of co-operative and mutual adjustment of acts in the promotion of the common good, but with increasing numbers "one is forced to live more and more in the presence of his fellows." In large and constantly increasing populations and membership in occupations, heterogeneity may, and frequently does, become a disturbing element, and organization with defined limitations of restraint and toleration becomes an important and necessary factor in the evolution of the highest type of ethical conduct. In other words, those acts which may be, as well as those which should not be, done must be set forth in such manner and form as may best promote the attainment of the highest standard of mutual good conduct.

Medicine is a composite science, and is, confessedly, the most difficult and intricate of sciences. The medical profession is, perhaps, the largest and most broadly educated class in every civilized community. Accessions come to it from every class and race of civilized people. In the broadness of thought and the beneficence of its acts and ends it invites every class and caste of civilized races to its ranks, that it may continuously widen and expand the scope of its usefulness and philanthropy to the end that every person and all peoples may seek and obtain through its good offices the full measure of a beneficent science.

In this country the evolution of medical ethics culminated in the adoption, at Philadelphia, in 1847, by a body of representative men—now known as the AMERICAN MEDICAL ASSOCIATION—of a code of American medical ethics, which, with a few explanatory declarations, has been accepted by the profession at large as the common basis and guide of good conduct. Previous to that date the profession, in a few isolated localities, had established codes to segregate the qualified and honorable from the charlatan and mercenary impostor, with satisfactory results.

The unanimity of its adoption, general acceptance and continued enforcement through half a century, without material alteration, eliminates any doubt of the wisdom of the adoption of such a system of good conduct. The question of policy being, therefore, settled, this discourse will be limited to the consideration of such salient features as set forth the influence of the unification of ethical conduct, to the end that every member of the profession of medicine may exert "his best ability to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness."

The code is subdivided into three sections, under the separate headings of: "The Duties of Physicians to Their Patients;" "Obligations of Patients to Their Physicians;" "Of the Duties of Physicians to Each Other, and to the Profession at Large;" "Of the Duties of the Profession to the Public, and of the Obligations of the Public to the Profession." The principles outlined in these headings are emphasized in detail, so that the whole is a concrete expression of the consensus of opinion of the duties and obligations which constitute the highest ideal of ethical conduct.

"Every individual on entering the profession becomes thereby entitled to all of its privileges and immunities," and, "should therefore observe strictly such laws as are instituted for the government of its members." Every

* Annual Address of the President of the Medical Society of the District of Columbia, delivered Dec. 20, 1899.

organization of physicians which by the adoption of its code of ethics, becomes affiliated with the AMERICAN MEDICAL ASSOCIATION must possess the inherent right to prescribe and enforce such restraints as may, at times, be needful to dicipline refractory members. Dishonorable conduct must have a limit. The Code, however, is free from any threat of restraint by prosecutions and penalties. It seeks to promote the evolution and unification of ethical conduct by sharply contrasting good and bad conduct and by marking the border line beyond which misdemeanor becomes a *corpus delicti*. It appeals to the nobler qualities of a higher standard of moral excellence and beneficence, in that the physician may be the minister of hope and comfort to the patient, and bases this appeal on the postulate that as the standard of qualification advances, so should ethical conduct rise along the gamut of evolution. "No scientific attainment can compensate for the want of correct moral principles." The Code pleads for mutual forbearance, fraternal courtesy and a broad and generous fellowship, that contumely, bickering, and discord may not fritter away the power and influence of the profession for good. Probity, candor and truth are qualities not less essential in support of professional character. "There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients." In such incisive words the Code vouches for honor and integrity, and stamps the derelict with the seal of condemnation.

The inviolability of the confidential communications of patients to their physicians is the first and most sacred obligation of professional life. It has come to us through the ages past as an unbroken rule of conduct, and all codes of medical ethics stigmatize with dishonor the voluntary disclosure of such confidences. The precept of the Code extends the obligation of secrecy beyond the period of professional service, to the end that "none of the privacies of personal or domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged except when imperatively required to do so." The force and necessity of this obligation are so great the profession has sought the protection of statute law. In twenty states and in this District such laws have been enacted, the object of which is the extension to citizens of liberty of privileged communications and their protection in the enjoyment of the rights of unreserved and confidential confession to physicians. Such statutes add the force and fiat of law to the decree of the medical profession, which has always and everywhere throughout the civilized world resisted the compulsory disclosure in open court of information "acquired in attending a patient in a professional capacity and which was necessary to enable the physician to act in such capacity."

With equal cogency the system of ethics sets forth the obligation of qualification: "Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice." To this is added the more authoritative declaration that "a regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession." So also does it insist that "the public ought likewise to entertain a just appreciation of medical qualifications, to make a proper discrimination between true science and the assumptions of ignorance and empiricism." These significant averments point to a high standard of scientific acquirement and expand the scope of ethical conduct.

Medical ethics, as formulated in the national Code, combines knowledge with morality, and emphasizes in spirit, if not in letter, the truism, that in medicine the highest attainment of either can not compensate for the want of the other.

The educational influence of the Code is attested by history and observation. The assemblage at Philadelphia, in 1847, was composed of the most distinguished and best equipped medical men from all parts of the country, who had come together to confer and devise a plan of organization, which should have for its object the unity of the profession on a basis that would define the duties and obligations of each individual member to each other, to the profession and to the public at large, thereby creating a compact body that would assert and make effective its prerogatives pertaining to the promotion of good conduct and elevation of the standard of medical education. Whilst the maximum development along these lines of progress has not been reached, sufficient has been accomplished to invoke the gratitude of every true and conscientious physician. It gave impetus to new thought, out of which have come the state medical practice acts; state and municipal sanitary legislation; the organization of health boards, associations, and departments; improved, enlarged and higher medical college curricula; a higher grade of scientific attainments; a more complete, and better adapted hospital construction, and improvement in hospital management; the protection, not yet complete in all the states, of the confidential communications of patients to their physicians from exposure in open court; and, with all, a wider scope of beneficence, a broader utility and more general diffusion of knowledge of sanitation and public hygiene. These and other reforms are the outcome of those precepts in the Code, which enjoin the duties of good citizenship.

The educational obligations are not, however, limited to the promotion of a higher standard of professional qualification. Under the heading of "obligations of patients to their physicians," the Code sets forth some very simple and general recommendations, which might contribute to the comfort and well-being of patients and increase the efficiency of medical service. "The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease and health, for the welfare of those who avail themselves of their services, certainly, have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants." No suggestion is made to interfere with the right of selection, but it does insist that a medical adviser shall be one who has received a professional education. Nor is the right to dismiss a physician denied, but justice and common courtesy require that the reasons for such dismissal should be declared. No physician not cognizant of the causes of his dismissal, can protect himself from sinister innuendo and defamation of character. Candor and frankness on the part of dissatisfied patients or their friends, and forbearance with good temper on the part of the physician, would eliminate, in most such cases, friction and discontent. Patients naturally depend on the skill, attention and

fidelity of their physicians, who should so "unite tenderness with firmness, and condescension with authority, as to inspire the minds of their patients with gratitude, respect and confidence." If every case committed to the care of a physician was treated "with attention, steadiness, and humanity" we would, probably, hear less of antagonism between physicians and patients, and professional work would more frequently result in mutual benefit.

The duties of physicians to the public comprise another educational function, which is so distinctly stated that nothing more is needed to invite attention than its re-statement in the language of the Code: "As good citizens it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations; the location, arrangement and dietaries of hospitals, asylums, schools, prisons and similar institutions; in relation to the medical police of towns, as drainage, ventilation, etc.; in regard to measures for the prevention of epidemic and contagious diseases," and "when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice on subjects strictly medical." The American Public Health Association is the outgrowth of these injunctions, and has, perhaps, accomplished more than any other organization in the fulfilment of the "duties of physicians to the public," by popularizing the study of the science of sanitation and promoting legislation in the interest of public health. In some measure it has removed the mask of exclusiveness, which obstructs the diffusion of useful knowledge among the people, and enlarged the opportunities for the practical application of the duties and obligations of good citizenship.

The very generous and magnanimous compliance of the profession with these injunctions has enlarged the sphere of its humane and beneficent instrumentalities, thereby contributing to the welfare of communities in the diminution of disease, preservation of health and prolongation of life. So much has been accomplished along these special lines of progress that one is surprised at the defiant antagonism of the lay directories of some hospitals and other medical charities, and of legislative bodies, which seek by hostile interference, and other reprehensible practices, to limit and thwart the counsel of those who are the only competent advisers. Such obstructive methods will not cease until the profession asserts and maintains its prerogatives in all the offices of good citizenship which pertain to the health of communities.

There is another thought entitled to consideration in this connection, which invokes a more general fellowship with the great body of scientists, and that larger class of persons, not specialists in any branch of science, but patrons of learning, seeking to acquire and diffuse knowledge among all classes of educated people. The profession must abandon the privacy and exclusiveness of the closet and meeting-room and engage more widely and effectively in the education of the public in preventive medicine, in which lies the hope of obtaining the highest aims of scientific medicine.

In affiliation with other local scientific and learned bodies constituting the Washington Academy of Sciences, this Society has entered a new and larger field of usefulness, which abounds in the opportunities of a broader conception of its duties and obligations that it may live more and more in the presence of the public at large. Scientific medicine must fail in its mission of humanity and beneficence in so far as it falls short of asserting the inalienable right to lead, direct, control and dominate popular ignorance, prejudice and cupidity, to the end that legislators and all others in authority must come to know its force and power in all things pertaining to the advancement of sanitary science and preventive medicine. The art of healing can not be dissociated from the science of prevention. The education and betterment of the people in sanitation is not less humane than the healing of the sick. During recent years this Society has made creditable progress in this department of medical policy, and now, with the co-operation of cognate and allied associations, it must hope to accomplish other reforms, still in abeyance through lack of information on the part of a suffering community.

The beneficent, moral and educational functions of the Code are more distinctly and conspicuously set forth than the lucrative. Moral duty "is independent of and superior to all pecuniary considerations," nevertheless, the services of physicians "are of such a character that no mere pecuniary acknowledgements can repay or cancel them." And inasmuch as the office of a physician can not "be supported as an exclusively beneficent one," it is the duty of the faculty in every town or district to "adopt some general rules, relative to pecuniary acknowledgements from their patients, and it should be deemed a point of honor to adhere to the rules with as much uniformity as varying circumstances will admit." Justice and equity are distinctly contrasted with mercenary extortion and gratuitous services to the affluent.

Non-sectarianism is a cardinal tenet of the Code. There is not one article or clause in it "that interferes with the exercise of the most perfect liberty of individual opinion or practice," or that interdicts, under any circumstances, professional services whenever there is pressing or immediate need of them. It does, however, assert that professional abilities and acquirements "ought to be the only acknowledged right of an individual to the exercise and honors" of the profession, and excludes from such association those whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the "aids actually furnished by anatomy, physiology, pathology and organic chemistry." In no trade or occupation do "mankind rely on the skill of an untaught artist." Medical knowledge is not intuitive. Every physician must "rely upon the rectitude of his judgment," because there is no tribunal other than his own conscience, enlightened by knowledge, to adjudge the penalties of carelessness, neglect or ignorance. The creed of medicine condemns the idolatrous dogmas of divine metaphysics, divine healing, "Christian Science," and other equally fraudulent practices, and relegates them to the jurisdiction of criminal codes.

The spirit and precepts of the Code have been legalized in most of the states by medical practice acts. In this district three systems of medicine have been legalized, with the requirement of the same standard of qualification of all licentiates in the branches of anatomy, physiology, chemistry, pathology, hygiene, histology, surgery, obstetrics and gynecology, diseases of the eye and ear, and medical jurisprudence, leaving the qualifications in the branches of materia medica, therapeutics and practice to be determined by the special

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requirements of each system. The movement, which originated with this Society, now in progress to unify the requirements of the state medical practice acts, is in the direct line of the teachings of the Code, and it may be desirable, in the near future, to eliminate from these acts all reference to different systems of medical practice and base the issuance of licenses to practice medicine on a uniform standard of qualification in the sciences which make up the science of medicine, leaving the disputed problems of therapeutics to the enlightened and conscientious judgment of licentiates.

Persistent misrepresentation of the non-sectarian spirit of the national Code of Ethics did in some measure, for a time, interfere with the progress of medical education, but with the inauguration under the auspices of the Code, of the new era of a higher standard of qualification, legislatures have come to know their constituencies would not longer tolerate the prevailing ignorance among practitioners in the "sciences which make up the art of medicine." By these adjustments of acts to ends, good conduct has obtained the sanction of law and the teachings of the Code have been re-inforced by the will of the people. Much, however, remains to be done, and the profession can not hold itself blameless for such shortcomings as may retard or impede the progress of education.

To such extent has this misconception grown that many people and some physicians believe the appellation of allopathy to the regular medical profession is a complimentary designation, and not, as intended, an opprobium. If there is a class or sect of people who hold the therapeutic doctrine that diseases are curable by the production of other diseases, such persons are outside of the regular profession and not fit to practice the healing art. The Code denominates its adherents and followers, "the regular profession," not in any invidious spirit, but because the system is based on a knowledge of the sciences which make up the science of medicine.

In matters of etiquette, ceremony, intercourse and consultations, the Code is distinctly advisory, but not in any sense mandatory. To promote the best interest of patients and to avoid reprehensible and contumelious interferences, professional intercourse must be guided by such uniform rules of good conduct as may conduce to harmony and co-operation in act and spirit. No hard and fast regulations can be made applicable in all cases. In exceptional instances all rules are subordinated to the emergency which demands immediate aid, but no circumstances can justify dishonorable and ungentlemanly conduct. If consultants were permitted to rush pell-mell, before the time agreed on, into the sick chamber, proceed with their examination without the aid to be furnished by the attendant, consultations, which are for the benefit of the patients, would in most cases be unsatisfactory, and in many disastrous to patients. The Code advises consultations in difficult and protracted cases, because they "give rise to confidence, energy and more enlarged views of practice," and enjoins on the consultant "the most honorable and scrupulous regard for the character and standing of the practitioner in attendance." To this end uniform formalities of etiquette and decorum dignify and emphasize the *esprit de corps* of professional intercourse, but really are of infinitely greater importance to the welfare of the patient.

Misconception of the tenor and misrepresentation of the purpose of the formal declaration of the duties and obligations of physicians in support of professional character have given rise to much inane criticism and sometimes sneering denunciation of medical ethics. There are very many good and well-meaning people who can not understand why physicians should not submit to their unstable will, and change and modify the ordinary courtesies of good conduct to sanction interference or to gratify caprice. Medicine is a deliberate and painstaking science, conducted as will best conduce to the attainment of its highest aims. It is not an emotional profession, to be swayed by every outburst of bad taste, bad breeding, ingratitude and discontent. If the Code tolerated submission to malevolent criticism and malign detraction, the practice of medicine would be degraded to the slavish service of menial servility. Medical men with loose and unethical methods, and others who have agreed on their honor to comply with the system of ethics have incited popular censorship by their failure or refusal to comply with its precepts.

No part of the Code has been so much assailed by dissenters and pretenders as that section that declares it "derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills inviting the attention of individuals afflicted with particular diseases, publicly offering advice and medicine to the poor gratis, or promising radical cures, or to publish cases and operations in the daily prints or suffering such publications to be made; to invite laymen to be present at operations, to boast of cures or remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician." These are the most positive interdictions of the Code. They set forth and condemn such meretricious methods to gain popular favor. Medicine is not a mercantile occupation, but a beneficent and life-saving science, and can not, therefore, accept the rules and practices of trade and business as the guide of good conduct in matters pertaining to the discharge of its special duties and obligations. The medical profession would soon sink to the level of the advertising and mercenary quack if it permitted its members to display their qualities and successes in the public press, or in hand-bills through the bill-poster, or in bulletins thrown into the doorways of private dwellings. In the rivalries of such reprehensible practices the ignorant and most unscrupulous would always be in the lead, and chicanery, duplicity and falsehood would be the winning qualities in the fierce struggle for subsistence.

"Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument," medicine or discovery, to dispense a secret nostrum, "or to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them." The public at large can not appreciate the force and necessity of these restrictions, because it fails to discriminate between the objects and methods of business and those of a beneficent and liberal science, which seeks to promote the welfare of the people. The patenting of surgical instruments, medicine and discoveries is not only "inconsistent with beneficence and professional liberality," but would retard the progress of medical science and limit the sphere of its good offices and usefulness. If Jenner had patented the discovery of vaccination, smallpox would have continued to scourge the world. In what condition would medicine and surgery be to-day, if Morton and Simpson had, respectively, patented ether and chloroform anesthesia? The lessened mortalities in medicine, surgery and mid-

wifery, due to these discoveries, can not be measured by the money value of the agents employed. If Sir James Simpson, Gustave Simon and Marion Sims had patented their inventions and discoveries, gynecology could not have reached its present state of development. In fact, surgical gynecology must base its achievements on the discovery of anesthesia in 1846, and the invention of the duck-bill speculum in 1848. If antisepsis had been patented, Lord Lister would not now be a peer of England, but a private citizen of Scotland, living, perhaps, on the accumulated royalty of his patent. Honor comes to whom honor is due, but never to one who traffics in beneficence. Such are some of the illustrations going to show the wisdom of these interdictions.

In this connection I must invite attention to another injunction, to the effect that physicians should exercise "their option in regard to the shops to which their prescriptions should be sent." The time has come when the public welfare and individual reputations impose this obligation on practitioners of medicine. The claims of right, by pharmacists, to prescribe across the counter, to sell poisons without restraint of law, to repeat and duplicate a prescription containing poisons without the knowledge and consent of the physician making it, and to dispense it to others than the original holder, have become such common evils, fraught with such danger to health and life, as to demand regulation by statute law. It may be that if any organized body of physicians should issue and enforce its mandate that patronage would cease with the continuance of the practice, the evil would diminish. While reputable pharmacists might accept the option of physicians as the rule of conduct, there are others who openly and defiantly declare their purpose to disregard any such restriction.

Proprietary pharmacy is the most pretentious of the artful devices of empiricism. The daily mails bring to every physician the advertising bulletins of proprietary pharmacists, filled with the certificates of physicians, setting forth the wonderful virtue of some special compound, mixture, tablet, or pill, each of which is extolled as a panacea for diseases having no etiologic nor pathologic relation to each other, and the credulous practitioner goes forth on his daily rounds enthused with the single idea that he has at last discovered a remedy with which he can drug, dose or feed every patient, and, when the day's work has been finished, congratulates himself with the accomplishment of the highest aims of a beneficent science.

The National Code of Medical Ethics is the official declaration of the policies of the regular medical profession of this country. As such it will continue to command the respect and attention of those who believe that ethical conduct is an element of success in the attainment of the confidence of the public. Observation and experience attest the soundness of this belief. Popular censorship never fails the detection of apostasy, and is quick to stamp dereliction with the badge of dishonor. No physician ever failed in the practice of medicine because of his high ethical standing. The occasional loss of a client because of adherence to the prescribed rules of good conduct is much less frequent than losses from such irregularities as invoke professional criticism and discontent of clients. Those who stand on the highest plane of ethical conduct and highest standard of professional qualification will most surely command the respect, confidence and admiration of the public; and reap the richest reward. The more the Code is studied, the more highly will its precepts and policies be appreciated, and the more widely will it be accepted as the guide of good conduct.

Original Articles.

ETIOLOGY OF NON-MALIGNANT RECTAL STRICTURE IN WOMEN.*

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Complete or partial narrowing of the rectum, having its origin in developmental anomalies, will not be considered in this paper.

Acquired rectal strictures are much more common in women than in men. Gosselin and Dubar[1] estimate the proportion as 4 women to 1 man. Of the cases of rectal strictures collected by Juliusburger[2], there were 103 women and 15 men, or about 7 of the former to 1 of the latter. Out of 110 cases treated by Allingham[3] in St. Mark's Hospital, there were 92 females to 18 males, or in the proportion of 5 to 1. The ratio is even greater in Cripp's[4] series of 70 cases, as out of this number there were only 7 males, or in the proportion of 9 to 1. Carré's statistics in 266 collected cases show 4 women to 1 man afflicted with the disease. The same ratio was found by Gant[6] in 25 cases, while the proportion in the 21 cases recorded by Quénu and Hartmann[7], in their recent work on the rectum, is considerably less, since there were only twice as many men as women. The only exception seems to be Kelsey[8], who in a series of 99 non-malignant strictures found 64 in males and 35 in females, or nearly twice as many males as females. However, the preponderance of evidence is in favor of the relative frequency of the condition in women, and justifies the presentation of the subject for discussion before a special society such as ours.

For the purpose of etiologic study, strictures of the rectum are conveniently divided into: 1, those where the caliber of the tube is diminished by pressure from without, organic changes in the rectal walls being secondary; 2, those where the rectal walls are primarily affected, narrowing of the rectum resulting from these organic changes.

1. *Strictures due to pressure from without.*—A tumor occupying the pelvic basin may so encroach on the rectum as to produce a decided hindrance to the passage of the fecal mass. It is exceptional, however, for a complete stricture to be formed, except in the presence of malignant growths, or localized inflammations of the mass where the increased pressure arises from bands of adhesions rather than the increase in size or peculiar position of the tumor. The writer recently recorded a case where temporary complete obstruction resulted from the pressure, on the upper part of the rectum, of what was found to be a malignant growth springing from the sacral region.[9]

In women this class of rectal strictures is usually caused by suppurative disease of the appendanges. Kelsey[10] reports an interesting case of a double stricture of the rectum caused by a pelvic abscess. Couper[11], Biggs[12], Balzer[13], and Quénu and Hartmann[14] have reported similar cases. At the present time, the true cause of the stricture is recognized and the condition rectified by the appropriate surgical procedure. Neglected cases, where the appendages are matted together and compress the rectum by dense adhesions, sometimes are not benefited by the removal of the genital organs, as illustrated by the following case in the writer's practice:

*Read by title before the American Gynecological Society, May 25, 1899.

The patient was a woman of 38, who had had attacks of pelvic peritonitis for fourteen years. On three occasions an abscess had been lanced through the vagina. In the past four years she had experienced more and more difficulty in obtaining bowel movements. An examination showed the pelvis filled with an exudate, in which uterus and ovaries could not be distinguished by means of bimanual examination. The rectal examination showed the bowel compressed against the coccyx by the pelvic mass. The uterus and appendages were removed through an abdominal incision, the adhesions being so dense that fingers were of no avail and the knife and scissors had to be employed. The patient recovered from the operation, but the symptoms of rectal stricture recurred gradually. A rectal examination, made about six months after the operation, revealed a stricture due to perirectal inflammatory tissue, situated about 2½ inches above the anus. The forefinger could not be forced through the compressed portion of the intestine. Any operative procedure short of a colotomy would have been of no avail. This the patient refused, and the case was lost sight of.

2. *Strictures resulting from organic changes primarily affecting the rectal walls.*—As in other organs of the body, an inflammatory infiltration of the rectal walls followed by an increase of connective tissue may lead to contraction and stricture of the rectum. Since these changes are distinctly inflammatory in their nature, strictures resulting therefrom can be grouped under one head, whether the primary cause of the inflammation be trauma, dysentery or syphilis. Whether a gross or microscopic examination of these strictures will enable one to definitely determine the primary or underlying cause in each case is still a mooted question, and because unsettled has had much to do with the preparation of this paper.

For convenience, the causal conditions which have preceded the inflammatory changes may be considered under the following heads: Trauma, dysentery, gonorrhea, tuberculosis and syphilis.

Trauma.—It is evident that an injury to the mucous membrane of the rectum, severe enough to cause loss of substance and ulceration, could result in a stricture. Foreign bodies introduced by the mouth or anus may be the cause of such injuries. Numerous instances have been recorded where bottles, wine-glasses and similar objects have been introduced into the rectum either by the insane or sexual perverts [15], [16]. However, a search through the literature has failed to reveal any recorded case where a stricture could be positively traced to the results of such violence to the parts. Of more interest is the alleged dependence of rectal stricture on protracted labors, associated with long-continued pressure of the head on the rectum. Allingham[17] mentions a case of this kind in a woman with no history of tuberculosis or syphilis. The stricture was almost complete, and was relieved only with difficulty. Quénu and Hartmann[18] have recently reported a case of stricture following a severe labor of thirty-six hours, ended by craniotomy. The stricture was complicated by rectovaginal and vesicovaginal fistulas. It is not improbable in this case that the stricture was caused by a perirectal inflammation superinduced by puerperal sepsis. In fact, this may be the true explanation of the majority of these strictures.

Not infrequently unskilful operations on the rectum, such as the removal of too much tissue in operations on hemorrhoids, the failure to secure union in the Whitehead operation[19] [20], etc., may be followed by stricture. Any resection of the rectum is liable to result in stricture, because of the difficulty of securing primary union between the proximal and distal extremities of the intestine.

Dysentery.—Since dysentery is marked by ulcerative processes in the colon and rectum, it has been assumed that large ulcerative patches formed by the confluence of a number of ulcers could result in the contraction of the affected part. This is the more probable since it has been shown by post-mortem examinations that the submucosa and muscularis can be invaded by the dysenteric ulcers. But, as pointed out by a number of authors, diarrhea consisting of mucus, pus and blood, accompaniments of any stricture of the rectum, has been called dysenteric, when in reality such was not the case. Undoubtedly strictures have followed a true dysenteric process, or the dysenteric ulcers have served as points of entrance of other germs, which in turn have led to inflammation, connective tissue hyperplasia, and narrowing of the rectal tube. Ballance[21], Costex[22], Allingham[23], and Quénu and Hartmann[24] report cases where there can be but little doubt as to the dysenteric origin. It probably is an exceptional outcome, considering the large number of people afflicted with dysentery. Woodward[25] calls attention to the fact that no case of rectal stenosis consecutive to dysentery has ever been reported to the surgeon-general, either during the war or since. In the writer's four years' experience as pension examining surgeon, although many hundred applicants were examined who complained of disabilities resulting from army diarrhea and dysentery, no cases of stricture were found, although each applicant was subjected to a careful rectal examination.

Gonorrhea.—Although occasional mention is made by the older writers, of gonorrhea of the rectum, the first undoubted case may be said to have been reported by Hecker[26], in 1788. Since that time more and more attention has been directed to the possibility of the rectal mucous membrane being a not infrequent seat of the disease. Yet even in recent years, since the discovery of the gonococcus has enabled the disease to be absolutely demonstrated, there is considerable controversy regarding its frequency. Wolff[27] had never met with rectal gonorrhea in women. Verchère[28], in a service of 800 patients, two-thirds of whom had genital gonorrhea, had never seen a case of gonorrhea of the rectum. Schultz[29], on the other hand, found 14 with rectal gonorrhea out of 174 women suffering from genital gonorrhea, and Bear's [30] statistics show even a larger percentage, for out of 429 cases of gonorrhea in women, 38.2 per cent. were found affected. These conflicting statistics can only be explained on the supposition that the proper methods of examination were not employed where the disease was not found.

In the same way, formerly gonorrheal ulceration was thought to be quite uncommon, but Bear, in the same article, states that it is not infrequently present. From studies of gonorrheal inflammation in more accessible parts of the body, it has been found that, while the gonococcus produces an intense surface inflammation, the underlying tissues are also affected, round-celled infiltration, connective tissue hyperplasia, and subsequent contraction resulting in a certain proportion of the cases.

If, then, gonorrhea can produce a proctitis, proliferating and stenosing, are we justified in assuming that in this lies the explanation of the frequency in women of rectal strictures? While gonorrhea may be the exciting cause of rectal stricture in a certain proportion of the cases, it is still far from being proved. It is assuming

too much and jumping too quickly to a conclusion to say that because gonorrhea of the rectum exists, it and not other conditions must be responsible for rectal stenosis.

Tuberculosis.—Ball[31] calls attention to the fact that a considerable proportion of cases of rectal stricture die from pulmonary phthisis, and thinks this "tends to show that in all probability a larger number of cases have really commenced in rectal tuberculosis than has hitherto been recognized.

Tubercular ulceration and stricture of the rectum have been noted for some time; especially was it found that tubercular disease of the rectum was liable to follow dysenteric ulceration. Tillaux[32], in 1894, published a case which he considered tubercular, but bacteriologic proof is wanting. It remained for Sourdille[33] to furnish these proofs, he being able to demonstrate the tubercular nature of a stricture of the rectum, a piece of which had been removed for microscopic examination during a posterior rectotomy. Inoculations also showed the tubercular nature of the disease.

In another communication, Sourdille[34] exhaustively considers the question of tubercular strictures and reviews the records of seven such cases. He thinks that at least one-third or one-fourth of the cases commonly supposed to be syphilitic are in reality tuberculous. This probably is an overestimate, but it at least serves to call our attention to the importance of carefully examining each case for the existence of the disease. An interesting feature, emphasized by the same author, is that the starting-point of the disease may not be a tubercular ulceration, but a submucous infiltration of the rectal walls, gradually ending in sclerosis and contraction.

Syphilis.—Whatever may be the rôle played by syphilis in the production of stricture of the rectum, it can not be denied that a relatively large proportion of those in which the condition exists give a syphilitic history.

Poelchen[35] states that in 119 patients suffering from rectal stricture, a doubtful syphilitic history existed, in 96 there was a positive history of the disease, while in only 6 could it be absolutely eliminated. Juliusburger[36], in 118 collected cases, has noted other syphilitic lesions 47 times, and in 25 cases a positive history of syphilis, the proportion affected by syphilis being 66 per cent. Godebert[37], in 67 cases, finds 47 with syphilitic histories.

Gosselin[38] seems to have been one of the first to deny that all strictures of the rectum were of syphilitic origin, a belief quite universally held up to this time. The writer, from a careful perusal of his paper, agrees with Kelsey[39] that Gosselin has been misquoted, and that he did not intend to convey the idea that strictures were due to chancroids extending upward, but that the disease is simply a local manifestation, due to the presence of the chancres and consecutive to the inflammation they have caused. Fournier[40] believes in the existence of a specific fibrous infiltration of the rectal wall, and possibly ending in an ulceration of the mucous membrane. From the contraction of this fibrous tissue results the so-called syphilitic stricture of the rectum. This anorectal theory of Fournier will not explain all cases of what may be justly considered syphilitic strictures, when they result from the contraction of large ulcerations of the mucosa and submucosa. These lesions are consecutive to the breaking down of gummatous deposits in the rectal wall. (Esmarch[41], Tuttle[42].)

Within the past few years two opinions stand forth prominently regarding so-called syphilitic rectal strictures. There are those who, like Schuchardt[43] and Rieder[44], claim that microscopic examinations of excised strictures show clearly that they are of syphilitic origin, and secondly, those who, like Duplay[45], Kelsey[46], Quénu and Hartmann[47], believe that a diagnosis of syphilis can not be positively made with the microscope, and that clinical and pathologic examinations of rectal strictures tend to show that they are due to a proctitis, among the causes of which may be numbered syphilis.

In his microscopic examination of rectal strictures removed from persons known to be syphilitic, Rieder has found that the arteries are nearly always normal, that the veins are markedly diseased, and that there is a chronic inflammatory infiltration of all the layers of the intestinal wall. The older the case, the more connective tissue is there present. By a special staining method of his, Weigert[48] is able to bring out elastic fibers about the veins. In the last stages of the disease very few changes characteristic of syphilis can be made out. Reider gives the name "venosclerosis syphilitica" to the changes about the veins, but admits that they may be produced by processes other than syphilis. Reider also seeks to explain the frequency of rectal stricture in women on the basis of a spread of the syphilitic virus by means of the veins. The initial seat is usually situated near the fourchette, and from here to the lower rectal veins is a much nearer route than from the foreskin of the male to the rectum by way of the vesical veins.

Schuchardt considers certain bluish-red nodules, to be found on the surface of the mucosa, pathognomonic of syphilitic disease. The submucosa is involved simultaneously with the mucosa. Breaking down of the tissues follows and cicatricial contraction results. It would seem as if Schuchardt had not succeeded in proving the correctness of his conclusions, for it is well known that gummata can not at all times be distinguished from certain tubercular formations. It may be noted that Rieder's statements regarding the involvement of the veins to the exclusion of the arteries is confirmed by the microscopic findings in one of Quénu and Hartmann's[49] preparations. Certainly, if it be left to microscopic examination to determine the syphilitic character of the disease, it is hardly just for this examination to be made in the last stages of rectal stenosis, when all that remains is a mass of sclerotic tissue. Future examinations made in the early stages of the disease will prove of the greatest value, and it is to be hoped that such investigations will be forthcoming.

As a slight contribution to our knowledge of the subject, the following case is reported. The patient was shown Dec. 7, 1898, before the Chicago Medical Society[50].

Mrs. K. R., married, aged 35, gave a negative family and no history of congenital syphilis. The menstrual periods, although painless, have never been regular. She was married fourteen years ago, and three years later gave birth to a male child who has shown no constitutional taint. No history could be obtained of acquired syphilis, gonorrheal infection or ulcerations about the anus or within the rectum. Since girlhood the patient has suffered from an obstinate form of constipation, evidently aggravated by neglect, as she only went to stool at intervals of several days. Eight years ago she noticed that the fecal masses were becoming smaller and flattened. From this time up to the present she has experienced more and more difficulty in evacuating the bowels, until before applying to the clinic she had not had a passage for nearly two weeks. Of late she has had considerable discharge of pus and slime from the anus. For the past year she has been gradually losing flesh and

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strength. Examination showed the patient considerably emaciated. The heart, lungs and kidneys were normal. There were no physical characteristics of constitutional disease. A vaginal examination showed the uterus to be retroverted and the appendages enlarged and adherent. Rectal examination revealed, one inch above the external sphincter, a dense tubular stricture of the rectum through which the finger could not be forced. By the vagina the thickened gut wall could be traced upward some inches, although the upper extremity could not be reached.

In March, 1898, nine inches of the rectum and sigmoid flexure were removed through an abdominal incision, an anastomosis between the upper and lower fragments of the gut being made outside of the anus by a modified Monsell operation. The patient made a perfect recovery, gained sixty pounds and was perfectly well when last seen, one month ago, a year after the operation. Before the rectum was enucleated, the appendages, consisting of a pyosalpinx on one side and a hydrosalpinx on the other, were removed. The following is the report of Prof. F. Robert Zeit, of the Klebs Pathological Laboratory, Post-Graduate Hospital:

Report on Case No. 409.—Specimens received for examination: Stenosis of the rectum. One ovary with dermoid and hydrosalpinx of same side. Other ovary adherent to tube with hemorrhagic follicle. Pyosalpinx of same side. Microscopic examination of pyosalpinx shows a dense infiltration of all three coats of the tube, with hyperplastic mucosa. The intima of all vessels is greatly thickened. Endarteritis obliterans present, with thrombi containing pigment. The same pigment is found also in the tunica intima. None in the tunica muscularis of these arteries. Endarteritis obliterans and thickened intima is also found in the walls of the hydrosalpinx. The stroma of the distended tube is densely infiltrated. The ovaries show much small-cell infiltration, some hyaline degeneration of vessel walls, with several hydrops folliculi and a corpus fibrosum. The rectum presents an hypertrophic muscular coat, with much small-cell infiltration and thrombotic vessels, thrombi containing pigment. The mucosa is slightly hyperplastic, but otherwise normal. Weigert's new stain for elastic fibers brings out numerous partly obliterated lymphatic vessels and small veins, but the larger vessels do not show any marked increase in elastic fibers. The intima of the arteries is not perceptibly thickened. Around the veins much small-cell infiltration still exists.

This case presents many interesting features. There was absolutely no history nor evidences of syphilis, yet the microscopic findings would lead one to think that such was the origin of the trouble. However, a positive diagnosis of syphilis could not have been made in spite of the endarteritis obliterans in the walls of the tubes, certainly not a common condition except in the presence of syphilis. A gross examination of the segment of rectum removed showed a normal mucosa, which was confirmed by the subsequent microscopic examination. This shows that the disease started in and was confined to the deeper layers, hence it could not have had its origin in chancroid, gonorrhea or trauma with ulceration. 'It corresponds with the descriptions of Fournier's "anorectal syphiloma." The microscopic findings of the arteries and veins correspond closely to those described by Rieder. The veins and lymphatics were the vessels affected, and the arteries were almost normal. The use of Weigert's stain brought out obliterated veins and lymphatics in the sclerosed portions of the tissue.

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Orexin in Persistent Vomiting of Pregnancy.

When instead of, or in addition to, the characteristic morning sickness, which does not affect the appetite or digestion later in the day, there is persistent rejection of food, impairing the general nutrition and threatening to exhaust the patient's strength, orexin in 5 grains after each meal is recommended by Dr. F. Hermanni (*Therap. Monats.*), who reports nine cases so treated with great success, the vomiting being quickly relieved, and the appetite returning mostly within a few days.—*The British Physician.*

ACUTE SUPPURATIVE ARTHRITIS OF CHILDREN.*

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I wish to call attention to the acute inflammation of joints, variously described under the titles "Acute Suppurative Arthritis of Infants," "Epiphysitis" and "Acute Ostitis of Growing Bone." I chose this subject because these cases are not generally understood, and many joints and lives are sacrificed on the altar of our ignorance.

These inflammations occur, as a rule, either as complications or sequels of other diseases, and may begin either as a synovitis, an epiphysitis, or an osteomyelitis. The majority of cases begin as an osteomyelitis. When accompanying the exanthemata, diphtheria or typhoid, they are usually due to a streptococcus infection. Cases complicating pneumonia have been reported in which the diplococcus was the cause. The joints most commonly affected, in the order of their frequency, are the hip, knee, shoulder and elbow.

In the synovial variety the symptoms are as a rule comparatively mild. There is local heat, swelling and tenderness, with a temperature of from 101 to 102 F. When the joint is quiet, the pain may not be severe, but the slightest motion will cause severe pain. When it occurs as a complication of some fever, the diagnosis is comparatively easy, but when it comes as a sequel or without known cause, it may be difficult. In the latter instance the febrile condition accompanying the joint inflammation is frequently mistaken for an essential fever.

When a decided rise of temperature or a sudden attack of pain occurs in a child suffering from, or recently recovered from, any of the above-mentioned diseases, all of its joints should be carefully examined. This precaution is especially indicated when the child is too young to call attention to the seat of its pain.

The most common error in this as in all other joint inflammations is to make a diagnosis of rheumatism. The latter does not remain in any one joint to the exclusion of others for any length of time, and it is not a suppurative affection.

Suppurative synovitis as a complication or sequel may be polyarticular. I have at the present time a patient who had suppuration of one elbow and of the sacro-iliac synchondrosis, as a sequel of typhoid, but it is not to this very grave form of disease, formerly known as pyemia, that I wish to call attention.

Suppurative arthritis may be confounded with the bone affection of infantile scorbutus, but in the latter careful examination will demonstrate that the soreness is in the shaft of the bone. When in doubt as to the character of the contents of a swollen joint, one should draw off a small amount with an aseptic hypodermic needle. When this disease is recognized and promptly treated, the prognosis is good, but when neglected, the joint surfaces are destroyed and the patient's life endangered. When the diagnosis is thoroughly established, the only treatment to be considered is free incision and drainage. The following is a typical case of suppurative synovitis:

In January, 1895, Dr. Disen, of Minneapolis, referred to me a child 4 years old, who had recently recovered from an attack of measles, and was then suffering from an acute inflammation of the left knee-joint. The child was suffering some pain constantly and very great pain on motion. The swelling extended up and down beyond the limits of the joint, but was most marked at the joint. This diffuse swelling is quite characteristic of the streptococcus infection. There was marked local tenderness and a temperature of 102 F. The color over most of the limb was normal, but at a point on each side of the patella there was a dull, red spot. The joint was flexed and the patient kept the limb with its outer side resting on a pillow.

The only difficulty was to differentiate between a suppurative synovitis and an osteomyelitis. I based my diagnosis of synovitis on the facts that the beginning was rather subacute, the temperature comparatively low, and that the swelling began in the joint as soon as the child complained.

A free incision was made on each side of the patella and rubber drainage-tubes were introduced, and notwithstanding the fact that the joint seemed completely disorganized, the child made a prompt recovery, with perfect motion in the joint.

The openings in these cases should always be free. It is a mistake to fill them with gauze without drainage-tubes, because gauze will not drain pus. It is always wise to explore these joints with a finger, for fear the original trouble may have been an osteomyelitis, as in that case more operating would be necessary. Irrigation with a warm normal salt solution is the best means of cleansing the joint. The dressing should be a large moist one, and should be changed frequently.

Prominent writers on joint diseases, as Macnamara and Howard Marsh, whose writings were published in the eighties, gave extended descriptions of epiphysitis as a disease of frequent occurrence in childhood. More recent writers, however, have demonstrated that while occasional undisputed cases of acute epiphysitis or epiphyseal osteomyelitis do occur, the vast majority of these cases are osteomyelitis beginning in the diaphysis just outside of the epiphyseal line. In these young patients the epiphyseal cartilage is very tender and may easily be perforated, but in the hip, the capsule of the joint extends beyond the cartilage, so that a perforation of the diaphysis close to the cartilage allows the escape of pus into the joint. When the disease does begin in the epiphysis it extends quickly to the joint, so that the joint symptoms soon overshadow the bone symptoms. It is well to remember, in this connection, that it is quite possible to have a sympathetic, catarrhal inflammation of a joint accompanying an osteomyelitis of the shaft, for what would be the only proper treatment for a suppurating joint would in this instance be a grave mistake.

Of these inflammations beginning as an osteomyelitis there are two well-marked varieties; one in which the symptoms are comparatively mild and which under proper treatment makes a complete recovery; and another in which the symptoms are those of an acute osteomyelitis with added acute joint symptoms, which, unless promptly and vigorously treated, results in more or less permanent injury to the joint. The latter variety may cause ankylosis, or there may be shortening and loose-jointedness from separation of the epiphysis. Between these two extremes are many grades of the disease, so that it is not always easy to classify a given case; my personal experience, however, teaches me that the prognosis after a timely operation is better than the findings would seem to justify.

In the mild variety the pain is not very severe, the temperature is not very high and the progress of the disease is comparatively slow. Swelling comes on grad-

*Read before the Western Surgical and Gynecological Association, Des Moines, Iowa, Dec. 27 and 28, 1899.

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ually, and the little patient refuses to use the joint. There is local heat and tenderness. The patient loses appetite and flesh. This type occurs most frequently in the hip-joint, and is unaccompanied by redness. The skin is white and the blue veins may become quite prominent. I have found it sometimes difficult or impossible to differentiate this disease from a rapidly growing sarcoma, until I had used the exploring syringe. This disease has very commonly been mistaken for tuberculosis, and has sometimes been pronounced typhoid. The prognosis in this class of cases is good when the disease is recognized and promptly treated, but when neglected, the joint is destroyed and there is more or less destruction of bone, which may cause shortening. The only treatment is free incision and drainage. The following is a typical case of the kind:

May 2, 1898, I was called by Dr. Benjamin of Minneapolis, to see H., aged 15 months, who at that time was comparatively free from pain when quiet, but suffered greatly when the left thigh was moved. The thigh was slightly flexed, was white and swollen, with enlarged veins over the surface. There was local heat and tenderness. The child was pale and emaciated, and lay perfectly quiet, making no effort to move the limb. At this time the temperature was about 100 F. The history given by the Doctor was that the child had been perfectly healthy until March 29, when he was called and found it with a temperature of 103 F., and a tympanitie abdomen. It was crying from pain which was seemingly in the abdomen. The temperature soon dropped to about 100 F. The child lay quiet but suffered when moved. Between two and three weeks after he was called, the left thigh was found to be flexed and somewhat swollen. The symptoms continued about the same until May 2, when I was called. We made a djagnosis of suppurative arthritis of the hip, but the thigh so closely resembled a rapidly growing sarcoma that it was deemed wise to use an exploring needle, which confirmed our diagnosis.

On May 14 the joint was opened and a large amount of pus evacuated. A drainage-tube was introduced and the child began to improve at once, and in six weeks was perfectly well. Examination on Dec 19, 1898, proved the child to be perfectly well, with free movement of the joint and no shortening. We have no knowledge as to the cause of the inflammation in this case.

The second variety begins as an osteomyelitis and quickly extends to the joint. The onset is usually quite sudden. There is often a chill and sometimes repeated ones followed by a temperature of 103 or 104 F. The pain is usually very severe and the whole limb is helpless. There is local heat, and tenderness and swelling soon follow, although this is not one of the early symptoms.

When the disease is in the hip, the swelling is not marked, and in a fleshy child may not be noticeable. At an early age, when the disease begins near any joint but the hip, local tenderness and sometimes swelling can be made out near but not in the joint. When it begins near the hip-joint this is not practical, owing to the distance from the surfaces, of the parts involved.

Those of us who have been in the profession for fifteen years or more were taught that these were cases of acute suppurative periostitis, and the result was that our methods of treatment were incomplete and disappointing. We know now that primary suppurative periostitis is very rare, if it ever exists, and we also know that the stripping of periosteum from a portion of the bone does not cause necrosis, but that necrosis is due to an inflammation beginning in the bone marrow, and that this inflammation is always suppurative.

We all understand the necessity of early diagnosis in all cases of osteomyelitis in order that we may promptly make an opening into the medullary cavity and thus stop the ravages of the disease, but the practical point I wish to make is that in infants and young children there is, owing to the anatomic peculiarities already mentioned, the added danger of an early invasion of the neighboring joint. By timely diagnosis and heroic treatment this joint invasion may be prevented. In all joints save the hip, the diagnosis and treatment are comparatively easy, but in the hip both diagnosis and treatment are more difficult.

When the disease is located in the lower end of the femur, there should be an early diagnosis and an opening promptly made into the center of the bone. I have never been content with drill-holes, but have always cut a window in the bone shaft, and have never had occasion to regret it. When the disease is located in the upper end of the femur, Macnamara has recommended and practiced drilling out the center of the neck through the trochanter, and reports some satisfactory results. I have never been fortunate enough to see one of these hip cases until after the joint has been involved, and have therefore had no occasion to resort to the drill, but have laid the joint wide open. I know of no instance in which free incision and drainage are followed by more satisfactory results than in these cases. Under this heroic treatment joints can be saved that are seemingly completely destroyed.

I have found that the easiest way to enter a hip-joint is from the front, through the opening recommended by Bradford in the operation for congenital dislocation of the hip. Theoretically this route is objectionable, because the pus must flow upward to get out, but practically it is perfectly satisfactory.

When called to one of these cases in which there is evidently an osteomyelitis, and in which there is also swelling of the joint, the surgeon should first aspirate the joint to ascertain whether there is a simple sympathetic or a suppurative synovitis. If serum is found in the joint, it will only be necessary to operate on the bone. If, however, pus is found in the joint, it must be opened and drained at the same time that the bone is operated on.

In the hip-joint, when the exact seat of the disease in the bone can not be located, it is usually quite safe to drain the joint, depending on the bone to drain itself through the joint. Unfortunately in these cases the epiphysis is often found separated.

I have met with several cases in which there had evidently been an acute suppurative inflammation of the hip-joint, which had opened itself, resulting in some cases in complete cure, while in others the sinuses remained open on account of necrosed bone or a separated epiphysis.

The following will illustrate this class of cases. A boy, 7 years old, was brought from the country to Asbury Hospital, Minneapolis, and was referred to me by Dr. Eitel. He was walking on crutches and was believed, by the friends and doctors at home, to be suffering from tuberculosis of the hip. The thigh was flexed and on motion crepitus could be detected. He was quite spare and in evident poor health, but there was no atrophy of the thigh. We learned that about six months before he came to the hospital he was taken

suddenly with severe pain in the hip and high fever, which at first were thought to be due to rheumatism and later to hip-joint disease. He continued with more or less fever and pain until he came to the city. I made a diagnosis of non-tubercular inflammation of the hip with separation of the epiphysis, and advised operation, which was readily accepted by the parents. On opening the joint I found the epiphysis separated and acting as a foreign body. It was removed and the joint thoroughly cleansed out. The boy began to improve at once, and in six weeks his wound was healed and he was able to stand on the limb. In this case there was a history of a traumatism, but it was not altogether satisfactory, so the cause may be said to be unknown.

The last case I shall report is that of baby O'Keefe, aged 16 months, a patient of Dr. Sweetser of Minneapolis, to whom I am indebted for the history.

On July 11, 1898, the child retired in perfect health, but cried the next morning when he put weight on his left leg. He crawled about that day and stood by a chair, but was too lame to walk. On this day he was examined by Dr. Sweetser, who found a normal temperature and pulse, no changed appearance of the hip, but slight flexion and tenderness. He had been walking for three weeks, had always been healthy, partly breast fed and partly on sterilized milk, and had had no intestinal trouble, no scurvy and has a good family history. He had measles the February previous, and a history of slight injury a few days before. Rest in bed was prescribed. July 16 he was worse, with some fulness about the hip and obliteration of the gluteal fold; temperature 102 F. July 17 he moved the leg with less pain; temperature 103 F. The next day the temperature was 100 F. The child was kept in bed, with an ice-bag on the hip; there was pain on motion. For the next month he continued about the same, with temperature fluctuating between 101 and 105. Toward the last he was very restless, perspired profusely and lost flesh rapidly.

On August 19, five weeks after the onset of the disease, I first saw the patient, in consultation, and we made a diagnosis of acute suppurative arthritis of the hip, and confirmed the diagnosis by removing pus with an exploring syringe. The pus was sterile under culture and contained no tubercle bacilli. The joint was drained through the anterior incision. The patient began to improve immediately, and on the third day the temperature became normal. In three weeks the wound was healed and the patient perfectly well, with motion in the joint perfect in every direction; the patient creeping, standing and making efforts to walk; no apparent shortening.

On December 15, five months after the attack and about four after the operation, I examined the child and found motion perfect in every direction, but with about half an inch shortening. While no necrosed bone could be found at the time of operation it is evident that there was either actual destruction of bone or of the growth center. If the shortening increases with the growth of the child, this will be conclusive evidence of the correctness of the latter supposition.

Traction of the Tongue in Hiccough.

This method of arresting uncontrollable hiccough, by continuous traction of the tongue for one to two minutes, has been mentioned casually before in. THE JOURNAL. Noir establishes it on a scientific basis in a recent communication to the *Progrès Méd.*, in which he cites observations and states that he has never known it to fail.

A PRELIMINARY INVESTIGATION OF THE THEORY OF THE INOCULATION OF MALARIAL FEVER THROUGH THE AGENCY OF MOSQUITOES.

BY ALBERT WOLDERT, M.D.
PHILADELPHIA.

The inoculation theory of malarial fever through the agency of mosquitoes is not a new one. It is said to have been mentioned by Roman writers about the time of the Christian era. Linne[1] and Sir Henry Holland viewed the transmission of malarial fever through the bite of the mosquito favorably. In 1807 Crawford[1] published a paper on "the Mosquital Origin of Malarial Fever," and King[2], in 1883, one on the same subject. It, however, remained for Patrick Manson to lay the foundation on which Ronald Ross has raised the superstructure of so many facts in connection with this important question. Battista Grassi probably formulated the axiom, *laddove c'è malaria ci sono zanzave*—where there is malaria, there are mosquitoes. Manson, after a long series of deductions, finally arrived at the conclusion that the mosquito acted as the intermediary host in the propagation of the malarial parasite, and published his most convincing paper on the subject in 1894. In the Goulstonian Lectures delivered in 1896 he further explained his convictions in regard to this theory. These publications of Manson influenced Ross to carry on the investigations which culminated in the present work now transpiring in various parts of the world. After Ross came Grassi, Bignami, Bastianelli, Celli, Marchiafava, and Dionisi of Italy, and later came Koch of Germany. The observations of Ross have been concurred in by Koch, Kossel, Nuttall, and Pfeiffer of Germany, by Laveran and Metchnikoff of France.

REASONS URGED AGAINST THE ACCEPTANCE OF THE THEORY.

Objections to the theory are many. One is that the entire subject is too new. Most men will probably agree that it is not the usual way in which infectious diseases are conveyed to man, and from one person to another. Again, it may be urged that the theory is against experience on this question; that only a few species of mosquitoes are capable of inoculating the disease; that observers, through their zeal, have mistaken artifacts for other than the spores of the malarial parasite; and lastly, one may ask, why should the malarial parasite choose the mosquito to act as the intermediary host in the perpetuation of its species? It is not the purpose of this paper to attempt to answer these objections. "Good reasons must perforce give place to better."

NATURAL ORDER OF MALARIAL PARASITES.

The natural order to which all recognized forms of malarial parasites belong, whether in man or birds, is to the order of *Gynosporidia*, class *Sporozoa*.

The foundation for the theory of the inoculation of malarial fever in the case of man has been built upon the experiments with bird-malaria—*Proteosoma* (Grassi), and *Halteridium* (Labbé).

HOW THE SPORES OF PROTEOSOMA ARE SUPPOSED TO BECOME STORED UP IN THE BODY OF THE MOSQUITO.

According to the theory of Manson, the first stage necessary for the propagation of the malarial parasite in the system of the mosquito is the development of flagellated bodies, which in turn become fertilized, after which they become more motile and penetrate the stom-

1. Baltimore Observer.
2. Popular Science Monthly.

ach and intestinal walls of the insect. Lodging in the muscular layer of these organs, a coccidium (zygote) or cyst is developed in which develop germinal rods or spores. After the lapse of seven or eight days it is believed this coccidium ruptures, setting free the spores into the body-cavity of the mosquito, thus entering the blood, by which they are conveyed to the veneno-salivary glands, where they become stored up to be inoculated into man at the moment the insect bites. The veneno-salivary—or venomo-salivary—glands are two in number, and located one on each side of the insect's neck. Each consists of three lobes, the latter of which communicates with the proboscis or beak by means of a duct which bifurcates in front of the esophagus in the shape of the letter Y. Two of the lobes of each gland are supposed to be salivary in function, while the central lobe is believed to pour out a secretion which has the power to cause constriction of the blood-vessels, or which has the power of coagulating albuminous substances. These secretions are ejected at the time the insect bites. It is known that the bite of this insect does not give rise to hemorrhage which is believed to be due to the properties of the secretions from these glands.

DEVELOPMENT OF THE GERMINAL RODS OR SPORES OF HALTERIDIUM AND PROTEOSOMA.

MacCallum, experimenting on birds whose blood contained *Halteridium*, observed that the parasites escaped from the infected corpuscles. After the lapse of a certain period they assumed a spherical form, and some of them emitted flagellæ which became detached and, after swimming about for a time, subsequently approached other spheres, which they entered, thus causing impregnation. Watching one of these impregnated bodies, he found that renewed vigor was manifested by very active motion and the power to penetrate both white and red blood-corpuscles. This same process occurs in the case of *Proteosoma*. It is believed that this impregnated body has the power of penetrating tissues and, after being formed in the stomach of the mosquito, finally penetrates its walls, and afterward forms the coccidium with its contained spores—germinal rods or germinal threads.

With certain modifications analogous processes are supposed to occur in the body of the mosquito, in the case of the human malarial parasite, to that observed in *Halteridium* and *Proteosoma*.

BIRD-MALARIA.

Ross has studied both species of bird-malaria, the results of which have been recorded by Manson as follows: The characteristics of *Halteridium* are that it extends along the nucleus of the red blood-cell and forms sporulating appendages at the end of this halter-shape of jugum. On the contrary, the *Proteosoma* sporulates in a different fashion. It is a more concentrated parasite, so to speak, occupying rather the center of the oval red blood-corpuscle, and, in order to obtain room, displaces the nucleus latterly. Both species of these parasites resemble the human malarial parasite in their structure. They are both intracorpuscular; they are both composed of pale protoplasm carrying a large number of grains of black pigment; they also sporulate and form flagellated bodies, so that in every way they seem strictly analogous and closely allied to the human malarial parasite. Bird-malaria in the tropics is prevalent in the warm season. Out of 111 wild sparrows caught in Calcutta, Ross found that 15 or 13 per cent. were suffering from *Proteosoma*. In most of these, the parasites were few in number and, excluding two of them, an average of only one parasite was found in each microscopic field.

THE FLAGELLATED MALARIAL PARASITE.

It was formerly held by some observers that the flagellated body represented a degenerated form of plasmodium, but through the patient investigations of Dock, MacCallum, and Ross it would appear that such does not hold good. In a letter to Manson, Ross tells of the following experience while examining the blood from a patient suffering from malarial fever: "I said I was going to watch free flagellæ. I found one in my first specimen and watched it continually for three hours. So much for the statement that free flagella soon become quiescent and vanish in the serum. At first it wriggled about for twenty minutes like a trypanosoma so that I could hardly follow it. Then it brought up against a phagocyte and remained there so long that I thought the phagocyte had seized it. Not so; it was neither killed nor sucked in, but was actively engaged in attacking the phagocyte. The flagellum kept at this for about a quarter of an hour and then wriggled away across two fields and in the direction of another phagocyte. Into this second phagocyte it pushed in several places with one of its ends and the phagocyte seemed to rear up and try in vain to get round and envelop the flagellum. At last the phagocyte seemed to give up the struggle and flatten out itself against an air bubble, the flagellum still attacking it. After fifty minutes and when the flagellum seemed to be getting exhausted a very curious thing happened. A third phagocyte approached coming rapidly across the field; but it had no sooner got near when the flagellum left its fallen foe and attacked a new one, holding on to it and shaking like a snake on a dog. In one minute the third phagocyte turned sharp round and quickly made off; it went right across a whole field the flagellum holding on. This continued for five minutes, after which the flagellum left the phagocyte. By this time the flagellum had become much more visible and had a large swelling in the middle. I watched it steadily as its movements became gradually slower. It was certainly able to attach itself to the cover glass (as shown by touching this with a pen) by either end, and even perhaps by the swelling. At last this swelling moved to one end nearly, and became very large and distinct until after three hours the creature evidently died; at any rate it curled up and ceased to move."

After penetrating the walls of the stomach and intestine of the mosquito, and after the stomach and intestine of the mosquito, and after the formation of the coccidium and germinal rods, this insect is supposed to act as the intermediary host of the malarial parasite in the same way as it does in the case of *Filaria Nocturna, Filaria Medinensis, Cyclops quadricornis;* and in the same way as do swine in tenia solium, and trichina spiralis. And it is further held that the malarial parasite is capable of being inoculated into man by the mosquito in the same way as is Texas fever into cattle by the bite of the tick—*Boophilus bovis*—and the tsetse-fly disease by the bite of the tsetse-fly—*Glossina morsitans*.

BIRDS INFECTED WITH PROTEOSOMA THROUGH THE AGENCY OF MOSQUITOES.

Ross found that mosquitoes fed on birds infected with *Proteosoma* contained enormous numbers of germinal rods within the veneno-salivary glands. He subsequently allowed these to feed on birds in which there were no parasites of *Proteosoma*, with the result that they became infected with the disease in from five to eight days. Ross, experimenting further with *Proteosoma*, found

that by feeding gray mosquitoes on sparrows, larks and crows containing this parasite, he was able to recover the pigmented bodies characteristic of this organism, within the tissues of the mosquito. Of 245 gray mosquitoes fed on sparrows whose blood contained the *Proteosoma,* 178, or 72 per cent., showed the pigmented bodies, while in 249 fed on the blood of sparrows devoid of this parasite, *not one* showed the pigmented cells in the walls of its stomach. Out of 28 originally healthy sparrows subjected to the bites of gray mosquitoes—previously fed on diseased sparrows—22, or 79 per cent., became infected within from five to eight days. Out of 22 birds experimented on by Daniels in the same manner, 54 per cent. became infected. Ross collected the larvæ of mosquitoes and kept them until they became adults, when he allowed ten of them to bite birds in which the *Proteosoma* were very abundant, and in dissecting out the stomach of the mosquito he found an average of 100 pigmented cells. Ten of these mosquitoes were next fed on birds in which the *Proteosoma* was only of a moderate quantity, and only an average of 29 pigmented cells were found; while of ten fed on birds containing no *Proteosoma, no* pigmented cells were found.

MAN INFECTED WITH MALARIAL FEVER THROUGH THE AGENCY OF MOSQUITOES.

Reasoning by analogy of what had been found in the case of *bird-malaria,* Amico Bignami, of the Institute of Pathological Anatomy of Rome, under the direction and supervision of Battista Grassi, records the following experiments made on man: "Thus was begun, on September 26, 1898, the third experiment. S——, who was by this time completely recovered from the indisposition following upon the preceding experiment, again consented to be the subject. I could not find any one else intelligent enough to understand the importance of the test and so self-denying as to submit to it. Along with S—— there slept in the mosquito-room another patient with nerve disease who, like S——, had never had malaria, nor as far as we were aware had never been exposed to the infection. And for a couple of nights a third patient, also a nerve case, slept in the room, but with this man the experiment was not continued. On October 3, I was obliged, for want of more material, to suspend the experiment. On the 10th to the 14th, there was an abundant supply of mosquitoes. On the 10th, S—— complained of headache. On the evening of the 16th, at 6 p. m., his temperature was 37 C., and on the following day he felt better. From the 17th to the 21st, there were but few mosquitoes left in the room; nevertheless both patients showed evidences of having been bitten. From the 19th to the 23d, no fresh mosquitoes were brought; on the 23d, there was a new but small supply. From this day onward until the experiment came to an end there were but very few mosquitoes in the room. The patients were, however, certainly bitten. During the last days of October S—— complained of malaise and headache. On October 31, his temperature showed a slight elevation to 37.2 C. (99 F.). On November 1, at about 3 p. m., he was seized with shivering which lasted until 5 p. m., the temperature rising rapidly to 39 C. (102.2 F.), between 9 p. m. and 10 p. m., when he again experienced a sense of chilliness. The fever continued all night. On the morning of November 2, his temperature was lower and during the night remained at 39 C. (102.2 F.), and on the morning of the 4th it rose to 40.4 C. (104.7 F.), the patient being in great agitation and suffering. A careful examination of the blood made on November 2, gave a negative result; in spite of the most diligent search not a parasite was found. On the morning of November 3, I found young ameboid parasites, few in number, mobile or discoid and without pigment. These went on increasing in number during the course of the day and in the afternoon were present in considerable quantity, some of them presenting pigmentation at the edges, the pigment being in fine granules. They stained with Romanowsky's method and with eosin and hematoxylin. The parasites belonged to the estivo-autumnal variety. The room in which the experiment was carried out forms one of the annexes of the San Carlo ward where none of the physicians have ever known an autochthonous case of malarial fever to occur, nor has malarial fever ever been known to originate in any of the neighboring towns. This fever then, identical with those prevalent at Maccarese, was contracted by S—— in surroundings in which there was neither water nor the soil of Maccarese (the mosquitoes having been sent from the latter place), but only its mosquitoes. Hence we are forced to the conclusion that the fever was actually inoculated by these mosquitoes. The varieties of mosquitoes experimented with were the *Culex penicillaris,* the *Culex malaria* (so-called) and *Anopheles claviger,* but of this last species only a few individuals were sent and only on one occasion during the course of the experiment."

At the present time it is claimed that the *Anopheles claviger* is the species of mosquito most concerned in the propagation of the malarial parasite. Grassi claims that he first discovered that the *Anopheles superpictus* could carry malaria, and was first to claim that *all* species of *Anopheles* could propagate it.

It has been said that the mosquito does not harbor the malarial parasite throughout the entire year, and that from January to May the forms are absent from this insect. Just how long the insect may live under favorable circumstances has not been definitely proven. In cold climates, should they find a suitable place, such as cellars or barns, they probably survive the winter. Many of the adult females die soon after depositing their eggs, and their bodies are readily devoured by the young larvæ, which are said to possess ravenous appetites. Ross has found the alimentary tract of the larvæ stuffed with the scales, fragments, limbs, and other remains of the parental insect. In this way it is supposed the malarial parasite may pass from one generation of mosquito to the next.

THE COCCIDIA OF PROTEOSOMA.

The youngest coccidia (or xygotes) of *Proteosoma* which have been discovered are those seen on the second day. At this time they have been described as being small oval bodies about 8 microns in the long diameter, and containing numerous fine pigment granules. They grow rapidly until the sixth day, and when they may attain the diameter of 60 or 70 microns, and on the seventh day are said to be mature zygotes. About the second or third day a faint capsule develops around the parasites, in which may be seen pigment granules and vacuoles. The pigment granules are often arranged concentrically as seen in diatoms. On the seventh or eighth day the coccidia are seen to contain 1, a large number of delicate thread-like, spindle-shaped reproductive bodies—germinal threads, germinal rods, sporozoites, sporozoids, spores, zygotoblasts; 2, a smaller number of large black sausage-shaped bodies, the nature of which has not been determined. The germinal threads are said to be from 12 to 16 microns in length, and about 1 micron in width, slightly twisted, and in the third dimension are flattened. The middle portion of the germinal thread

contains vacuoles and chromatin granules, and is much wider than either extremity, which is pointed.

The large black sausage-shaped bodies when mature are from 16 to 20 microns or more in length and from 2 to 3 microns in thickness. They have been described as having a cylindric shape, curved, sigmoid, or variously twisted. Ross has found germinal rods together with these black bodies contained within the same coccidium. They have been fed by the mouth, to sparrows, without giving rise to *Proteosoma*. Ross is of the opinion that they may be able to infect the larvæ of the mosquito at the period of maturation.

WHERE THE COCCIDIUM AND GERMINAL THREADS OF PROTEOSOMA ARE FOUND IN THE TISSUES OF THE MOSQUITO.

The coccidium (zygote) of the *Proteosoma* has been most frequently found in the stomach and intestinal walls of the mosquito, while the germinal rods are for the most part found stored up in the venomo-salivary glands and ducts. But the latter have also been found dispersed throughout the insect's body. Ross thus describes the tissues of the stomach of the mosquito: "If you examine a mosquito's stomach with a microscope (1-12 oil-immersion lens), you will find the wall is made up of several layers. The outside layer is composed of ramifications of the air vessels of this insect. Beneath this you will find a structureless sort of membrane which does not stain easily; and below this again and forming the lining membrane, the mucous surface, so to speak, of the mosquito's stomach, what might be called the epithelial layer, composed of several strata of cells. The pigmented cells of *Proteosoma* do not occur as might be supposed among the soft epithelial cells lining the inner surface of the stomach, but they lie in the outer homogeneous layer covering this or between the meshes of the muscular fibers." On dissecting out the insect's stomach, he found that by exercising only slight pressure on the cover-slip the coccidium ruptured, setting free myriads of germinal threads. The germinal rods have been found in greatest abundance in the venomo-salivary glands. Here they lie scattered both within and without the cells, while the salivary duct has been found to contain myriads of them. As a rule more sporozoites are found in one gland than in the other. They have also been found in the blood, muscular tissue, and juices of the head and thorax of the mosquito. The black bodies have been found in the muscular and connective tissue of this insect (?).

OTHER PARASITES FOUND IN THE BODY OF THE MOSQUITO.

Besides the coccidium, bodies of *Proteosoma*, other parasites have been found in the body of the mosquito, e. g., a nematode, a fungus, a gregarine, a sarcosporidium (?); a coccidium (?) and certain swarm spores, besides one or two doubtfully parasitic forms; yet Ross has been unable to trace any of these parasites to the ingestion of malarial blood, nor has he observed special protozoa in the evacuation due to such ingestion.

DISCOVERY OF PIGMENTED CELLS IN MOSQUITOES WHICH HAVE BEEN FED ON MEN SUFFERING FROM MALARIAL FEVER.

The changes which have been found to occur in the system of the mosquito in avian malaria are, with certain *modifications*, supposed to also occur in the case of human malaria. Many theories remain unproved. On Aug. 16, 1897, Ronald Ross allowed eight mosquitoes—genus *Anopheles*—to feed on a patient whose blood contained crescent malarial parasites. Four of them were killed at once, for the purpose of studying flagellated bodies. Of the remainder, two were examined on the 18th and 20th days respectively, without anything being noted. The seventh insect was killed on the 20th, four days after having been fed. In the upper half of the stomach, lying among or within the cells, a dozen round or oval—12 to 16 microns in diameter—pigmented cells were found. The outline was said to have been sharp and colorless, without nucleus, and the contents were filled with vacuoles. Each cell contained from ten to twenty black or dark pigment granules identical in appearance with the well-known and characteristic pigment of the malarial parasites—large quartans and crescents—derived spheres. These cells were devoid of contractile, intracellular or ameboid movement. The pigment granules were not scattered throughout the cell body, but arranged in lines transversely or peripherally, or in small circles round the center. They did not become more refractive on change of focus. In some cases the pigment granules showed a rapid oscillation, but did not change their relative position in the field. "Owing to their blackness, so different from the bluish yellow and green granules and debris found in and about the neighboring cells, they arrested the eye at once. Upon being irrigated with a 40 per cent. solution of formalin, the bodies became more visible than before, as compared with the stomach cells." On the fifth day other similar cells were found nearer the esophageal end of the stomach and were distinctly larger and more substantial than on the fourth day, and had a thicker outline.

Manson states that Bignami and his co-workers found that two days after the estivo-autumnal blood rich in crescentic bodies had been taken into the stomach of the mosquito, the coccidium forms had found their way into the stomach and intestinal wall, and lay encapsulated between the muscle fibers. On the sixth day they had increased enormously in size, and projected into the lumen of the alimentary canal. Very gentle pressure at this stage sufficed to rupture the cyst and set free the germinal rods or spores.

A correspondent of the *British Medical Journal*, of recent date, writes that during the fever among the West Indian troops at the suburb of the Wilberforce barracks, mosquitoes are caught and examined daily, and found to belong to the genus *Anopheles*. All varieties of fever are said to prevail there, and it is presumed that the genus is capable of giving rise to all kinds of malarial fever. He states that the parasites have been found in all stages, namely, the young zygotes and the mature ones, and the zygotoblasts or germinal threads have been found in the veneno-salivary glands of this insect. The quartan and tertian can be recognized by their contained pigment, that of quartan being of a dark-brown color and comparatively scanty, that of tertian being copious and fine and of a light-brown color. The youngest tertian zygotes are said to resemble the mature gametocytes, non-sporulating forms found in the human blood itself. "They differ from those of *Hemameba relicta 'Proteosoma Grassii'* by being considerably shorter, thicker, and less twisted and bent, and lie in bundles, and not irregularly placed in the gland." In one insect in which the stomach showed numerous empty capsules, the salivary cells were packed with numerous hosts of zygotoblasts, bundles of which could be seen lying outside the cells, but within the containing capsule of the gland; while other bundles lay within the cells, others again were making their way into the central duct.

The duct itself was said to have been crammed with these bodies lying parallel to its axis. The insects were caught gorged with human blood and kept two or three days until the meal was evacuated; they were then examined and found to contain zygotes of the second and third day, or zygotes corresponding to the time elapsed since the insect was fed, while at the same time older zygotes were found, showing that these had been infected at a previous meal.

It is believed that when the insect bites, not all the germinal threads escape from the venomo-salivary gland, hence any number of persons may become infected by a single mosquito. It is stated by Bignami and Bastianelli that certain differences exist in the arrangement of the sporozoids—germinal threads—in the sporozoon in the different forms of malarial fever. The sporozoids are more regularly arranged in the capsule of the tertian, and from this disposition of the sporozoids they are able to distinguish whether a mosquito is infected with a tertian or estivo-autumnal parasite.

The *zygotes of human malaria are differentiated* from bird-malaria, as has been mentioned, from the fact that in the former they are considerably shorter, thicker, and less twisted and bent, and they lie in bundles and not irregularly placed in the venomo-salivary gland.

NOMENCLATURE OF SEXUAL ELEMENTS OF THE MALARIAL PARASITE.

Before sporulation the elements are spoken of as "gametes," and after fertilization they become the zygotes. "Gameti" forms are sexually-mature forms. Bastianelli and Bignami designate the flagella by the term "microgameti." In the case of the tertian parasite the bodies are divided into two forms, namely: "microgametocytes" or male, and "macrogametocytes" or female forms. The nucleus of the microgametocytes is centrally located, and the chromatin is abundant and in filaments, while in the macrogametocytes the chromatin is scarce and occurs in the form of granules. The flagellated organisms are sometimes spoken of as "spermatoids," while the larger non-flagellated bodies are denominated "ovoids." Fertilization of the elements is believed to occur in the system of the mosquito, while in man it is believed that they remain *sterile*.

On Aug. 27, 1899, Ross sent a telegram from Las Palmas, Africa, to the Liverpool School of Tropical Medicine, announcing that the complete life-cycle of the quartan parasite had been demonstrated on mosquitoes in the same manner as that of tertian and estivo-autumnal fevers. The genus *Anopheles* was used.

(To be Continued.)

SPASMUS NUTANS.*

BY I. A. ABT, M.D.

CHICAGO.

Spasmus nutans is a disease which was first described by Romberg[1] and Henoch[2], and which appears in the literature under a variety of names: head-nodding, rotatory and rhythmic spasms. Gyrospasm of the head is a term which Peterson[6] has applied to the rotatory variety of the disease. Two cases of spasmus nutans have come under my observation, which I desire to report.

CASE 1.—B. R., aged 9 months, was sent to the Michael Reese Hospital, Feb. 15, 1898.

Family history: The father is living and well. The mother is a dwarf and has borne five children; two are dead; one is said to have died of pneumonia at the age of 11 months; the other, a male child, died at the age of 7 months, after an operation had been performed on its head for some disease the nature of which was not known to the parents.

Present disease: Five weeks before the child was admitted to the hospital, it fell from a high chair, cried immediately after having fallen, and continued to do so for about ten minutes. After this it resumed its play. On the third day after the injury it began to shake its head fore and back. The movements have continued almost incessantly since. These were sometimes interrupted when the child's attention was attracted, but the nodding very soon began again. The movement ceased during sleep. The movements of the arms and legs were free and co-ordinated, appetite good, bowels regular and sleep normal.

Physical examination: The patient was fairly well nourished, the skin pale and slightly icteric. There were no marks of trauma on the head, and the fontanelle was normal; the pupils were regular and reacted to light; there was no strabismus. After a prolonged observation it was noted that the child had a lateral nystagmus of both eyes. The face presented nothing abnormal. The examination of the pharynx and tongue was negative. The child had nodding movements of the head, which were almost continuous; at times, if it fixed on an object with both eyes, a slight rotatory movement of the head occurred soon followed by the usual nodding. The thorax showed, in its lateral portions, a slight depression. A rosary occurred on the ribs. The extremities showed a slight enlargement of the epiphyses, and plainly indicated the presence of rickets. The examination of the heart and lungs was negative, while the abdomen was protuberant; the abdominal organs presented nothing abnormal. The ophthalmoscopic examination revealed normal fundi.

The child remained in the hospital for six weeks, at the end of which time the movements had entirely disappeared. It was readmitted to the hospital ten days after its discharge, because it was suffering from acute gastro-intestinal catarrh; it recovered from this in a fortnight. During all this time the child did not show any return of the nodding spasms, but reported subsequently, at intervals for a period of six weeks, without any return of its trouble.

CASE 2.—L. B., aged 9 months, was admitted to the Children's Ward of the Michael Reese Hospital, May 5, 1898.

Family history: The father is living, though he is voluntarily separated from his family. The mother is living and well. The patient is her only child.

Previous disease: The mother reported that the child had a purulent discharge from both ears three months ago. The ears were examined while the child was in the hospital, and no indication of an active suppurative process or any perforation of the membrana tympani could be found.

Present disease: Three months ago it was observed that the child made incessant rotatory movements of the head during its waking hours; also that it had nystagmus of both eyes. Arresting the attention sometimes caused a slight cessation of the spasms, though the movements occurred after a momentary pause with apparently new vigor, and proceeded as before. The nystagmus was horizontal in direction; it was continuous during the waking hours, save for momentary interruptions at short intervals, and occurred in both eyes. Bandaging the eyes or excluding the light seemed to stop the movement

*Presented to the Section on Diseases of Children, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

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of the head for a short time. There was no strabismus; the ophthalmologic examination made by Dr. C. P. Pinckard showed both fundi normal. The child was unusually bright and active, and of excellent physical development, and remained at the hospital for forty-seven days.

The physical examination, except the points already referred to, was negative.

Treatment: Bromid of soda was administered in 3-gr. doses three times daily, and the child nursed at the mother's breast, and placed under the best possible hygienic conditions. The child improved very much, though at time of its discharge it occasionally showed some rotatory movements of the head and slight nystagmus.

A disease which has been frequently confused with spasmus nutans is eclampsia nutans, or the saalam convulsions described by the older authors. West[3] says that children who are attacked with this disease bend the head and body slightly forward, a movement which is continued with great rapidity, sometimes twenty, fifty, or even a hundred times, and then ceases, but returns once or oftener every twenty-four hours. During the attack the child seems bewildered, but complete consciousness returns as soon as the movement ends. In addition to these attacks, there is a general failure of health and enfeeblement of the mental powers. The tendency of the disease is to pass into confirmed epilepsy. Soltmann[4] and Gerhardt[5], both of whom have written treatises on spasmus nutans, do not separate it from eclampsia nutans. Gerhardt distinguishes two varieties of the nodding disease, a mild and a severe form. The mild, he maintains, is a reflex spasm, and the severe form is due to some variety of meningeal irritation, though he adds that the precise pathologic anatomy is not known. The severe cases terminate in idiocy or epilepsy. The latter variety, it is obvious, is to be classified as cases of eclampsia nutans. In more recent times there has been a tendency to omit the term spasmus nutans from the nomenclature, and to describe the disease under a variety of other names. Thus Caille[12] describes "two cases of nystagmus associated with clonic movements of the head in rachitic babies." Peterson[6] reports five cases under the name of "gyrospasm of the head." Samuel Gee[7] describes the condition as "head-shaking in children," and Holt[8], under the name of "rotatory and nodding spasm of the head." W. B. Hadden[9] refers to the condition as "head-nodding or head-jerking." Dawson Williams[10], in a recent treatise on the "Diseases of Infancy and Childhood," speaks of "clonic spasm of the neck," which may be rotatory or lateral. Spasmus nutans, he erroneously remarks, is sometimes called eclampsia nutans. R. W. Raudnitz[11], in a very exhaustive monograph treating of this subject, retains the name spasmus nutans. This nomenclature has the advantage that it prevents the evercontinuous multiplication of terms to describe one and the same disease, and it also has a historic and clinical value in that it preserves for us a description of the earliest cases of eclampsia nutans with cases of spasmus nutans.

Head movements: The head may move at the rate of 80 or 100 times per minute, though the movements may be as rapid as 120 or 160 times per minute, particularly if the child be excited. The movements consist in oscillations from left to right or right to left. Peterson[6] reported five cases, all of the rotatory variety, and he described them under the name of gyrospasm. Of the 15 cases reported by Raudnitz[11], 5 showed nodding movements, 6 rotatory movements and 2 were of the mixed type, i. e., sometimes the rotatory and other times the nodding movements occurred. In 2 cases no movements of the head were noted. Frequently the first manifestation of the disease is a wryneck, and then this is followed by the head movements or the nystagmus. The onset of the disease in any case is gradual.

Caille[12] observed that the head movements cease when both eyes are bandaged. Raudnitz confirmed this observation in a number of his patients. He also observed that the wry-neck ceased when both eyes were bandaged. He found, in a certain proportion of his cases, that the movement ceased if one eye was bandaged.

The nystagmus: While there are cases of genuine spasmus nutans reported in the literature where nystagmus is said to have been absent, nevertheless recent studies teach that nystagmus is present at some time during the course of every case, though it may disappear before the involuntary head movements have ceased. The nystagmus may be present in one or both eyes. It occurs later than the other symptoms, and disappears, as a rule, before other spasmodic movements, though cases do occur where the nystagmus is the most prominent symptom. In regard to the direction of the oscillations of the eyeballs, we find that various combinations occur. Thus the movements may be horizontal in both eyes, or vertical in both, or the movement may be so arranged that vertical, horizontal and diagonal oscillations occur in the same eye at different times. The movement in one eye may be more marked than in the other, or the nystagmus may be absent in one. Peculiar temporary changes occur in the position of the eyes, adduction of one is frequent, abduction occurs less often. Spasmodic movements of the lids is of frequent occurrence, though excessive secretion of tears is seldom observed. Cases of strabismus have been reported by most observers. The fundus of the eye has been reported as normal.

Etiology: Much speculation has been indulged in as to the cause of this disease. The older authors disposed of the etiology by considering the condition to be of reflex origin; thus Henoch[2] attached great importance to dentition, but we know that the disease occurs commonly before the period of dentition, and also after the temporary teeth have appeared. Derangements of the alimentary canal have been considered the cause. Rickets is so commonly found associated with the disease that it has been rather generally regarded as bearing a causal relation to it. Raudnitz[11] found rickets present in 14 out of his 16 cases. Dickinson[13], Hadden[7] and Caille[12] offer corroborative statements.

Head injury not uncommonly precedes the disease, thus, in 3 of Hadden's cases and 2 of Peterson's, as well as in 1 of my own, the history of traumatism could be obtained. Holt[8] suggests that possibly the disease is a variety of cerebral concussion. B. Sachs[14] says that if the condition be developed in late years, it may be regarded as a habit, but if the movements begun in early infancy are associated with nystagmus, strabismus or idiocy, one need not hesitate to refer them to a cerebral lesion. The region of the cranial nerve nuclei, he says, would most probably be the seat of the trouble, and the lesion we must suppose to be irritative in character. Many facts in the clinical history of these cases would speak against this latter view. The fact that most of these children are vivacious and intelligent, and tend in a comparatively short time to make a spontaneous recovery would cause us to doubt the existence of a central lesion. And, again, nystagmus of central origin is accompanied by a train of other symptoms which have not been observed in the cases of spasmus nutans.

Caille[12] believed that the movements of the head were caused by the effort of visual fixation on the part of the child. Fixation is difficult on account of the nystagmus. To prove this he showed that if the eyes were closed by the application of a bandage, the head movements ceased. Raudnitz also believes that the head movements are due to the failure of the process of visual fixation. He confirms the experiments of Caille by bandaging one or both eyes, whereupon the head movements cease. But he goes a step farther than his predecessor, in that he attempts to explain the origin of the nystagmus. The nystagmus, he thinks, is caused by the residence of these children in dark and dingy dwellings. In two of his cases he was enabled to show that removal of the patients to light rooms caused the cessation of the entire process; he also suggests that the disease tends to relapse during the dark seasons of the year, and that not only are the dwellings dark, but also that the children spend the greater part of their time in their rooms and in bed, and that the facilities for artificial lighting are meager. To corroborate his findings he quotes a case recorded in the literature. A child of 9 months was amused by fastening playthings directly above the cradle; in consequence of this the child looked constantly up, and a vertical nystagmus resulted. The playthings were removed and the nystagmus ceased in about two weeks. Magnus[15] observed a child of 10 weeks who was kept in a dark room lighted by a gas lamp on which the child almost constantly fixed its vision. In a short time the child had nystagmus and blepharospasm. It was removed to a light room and prompt recovery took place. Spasmus nutans and nystagmus do not occur every time a child is kept in a dark room. The same is true of miners, of whom it has been shown that only 4 per cent. become afflicted with nystagmus. We conclude that some internal condition of the organism must be sought for in order that the nystagmus may be explained. Rickets being prevalent in a large proportion of cases, it is reasonable to believe that the disease acts by causing weakness of the eye muscles, and a general fatigue of the entire organism. Or there may be some defect in the visual function, or in the dynamics of the muscular arrangement of the eyes, which will permit a certain proportion of cases to become afflicted with nystagmus if the proper external conditions are present.

Prognosis: Spasmus nutans does not offer any danger to life, nor does it in itself visibly affect the general health; these children are usually bright and active; the disease does not exhaust the patient, and in the majority of cases no other nervous symptoms are present. Relapses are not uncommon. The duration of the disease seems to be three or four months on an average. One of Raudnitz's cases lasted twenty months, and the patient suffered a relapse later; the shortest duration in his series was four weeks. Henoch saw patients who were cured in one and two weeks.

Diagnosis: From what has been said concerning the symptomatology of the disease, it would seem that the diagnosis would present no difficulty, but the greatest confusion has prevailed concerning the diagnosis. As has already been stated, cases are described under the head of spasmus nutans, which are in reality cases of saalam spasm or eclampsia nutans. In these nystagmus does not commonly occur, and they terminate in irregular epileptic attacks and paralytic conditions. These children eventually become feeble-minded, and are to be considered as cases of epilepsy with some special cerebral localization.

Cases of congenital juvenile nystagmus which depend on some lesion of the nervous system or some defect or disease of the visual apparatus should be differentiated from the cases of spasmus nutans. Multiple sclerosis, hereditary ataxia, cerebellar tumors are diseases which may be accompanied by nystagmus, and would present little or no difficulty in diagnosis. Raudnitz has seen a case of tubercular meningitis diagnosed as a case of spasmus nutans, because of the nystagmus and of the convulsive movements of the head and extremities.

Treatment: Cases of uncomplicated spasmus nutans tend to make a spontaneous recovery. The condition of the general health should be ascertained, and tonics should be administered if indicated. If the child is rachitic, antirachitic treatment and diet should be instituted. Bromid of soda, either alone or combined with tincture of belladonna, undoubtedly exercises a favorable influence on the course of the disease. Mills[16] suggests the use of one minim of the fluid extract of conium. In view of the theory that the condition is allied to canine chorea, and in the light of the suggestion of H. C. Wood[11], that quinin has a controlling power over the choreic movements of the dog, Mills suggests that quinin be given in increasing doses to children suffering from this disease.

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ELECTRICITY IN DISEASES OF THE NOSE, THROAT AND EAR.*

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The application of electricity, which has been found so useful in medicine and surgery generally, has not been entirely neglected in the special department of ear, nose and throat diseases, and appliances more or less complete for its application may now be found in the office of every advanced laryngologist and otologist.

The use of electricity in diseases of the nose, throat and ear, not only in the treatment but also in the diagnosis and prognosis, has now become so extensive and varied that the limits of this communication will permit hardly more than a general survey over the field of electrotherapeutic progress. It is hoped, however, that this will not be without its points of interest.

As an illuminating agent, electricity still holds its own in this department, in spite of the Welsbach, acetylene and other lights that have been recommended. The yellowish light of the incandescent lamp does not give the natural coloring to the mucous membrane, as is the case with the Welsbach and other white lights. Our judgment of things in general, however, is always relative and we soon become accustomed to the abnormal

*Read at the Annual Meeting of the American Electro-Therapeutic Association, Washington, D. C., Sept. 22, 1899.

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coloring, and, in fact, do not realize it until we compare it with the appearance presented by the sunlight or the Welsbach burner. For the smaller lamp used in examining the accessory cavities, the incandescent lamp has not been replaced.

The application of electric energy as a cauterizing agent is of the greatest value in rhinology and laryngology. For reducing hypertrophies and destroying tumors, the application of the electrocautery within the nose and throat is admirable. The instruments for applying the caustic effects may be carried, without harm, to the various parts of the nose and throat, and the application, completely under the control of the operator, may be commenced and ended at pleasure. When the chemical cauteries are used, in addition to the danger of applying them to parts for which they are not intended, it is difficult to limit the cauterizing effects, as the chemical combinations, which are started by the application of the chemical agent, continue for some time after the operation and can not always be stopped even by the application of a neutralizing agent. With the electrocautery this is not the case; the action is commenced when the current is admitted, and ceases when the circuit is broken.

The application of galvanism and faradism has not been developed in this department to the extent the importance of the process demands. In view, however, of the greater conservatism which is now manifested, this will probably come into more prominence in the near future. It is certain, however, that the subject will prove a fruitful field for further development.

I do not refer here to the application of galvanism and faradism in the treatment of paralytic and hypokinetic conditions of the muscles of the throat, as its value in this connection has been fully recognized; nor to its use in goiters, and Basedow's disease, in which electrotherapeusis is admitted to be of value. I refer more especially to the use in influencing vascular changes and correcting pathologic conditions in the nose and throat, in which electrotherapeutics is probably of great value, but in which it has been thus far but little used.

While the limits of this communication will not permit me to go into details in this connection, I can not but call attention to the value of galvanism in the treatment of so-called catarrhal affections. Not only is it founded on the most conservative principles, but it has given results which already give evidence of its efficacy and compare favorably with other procedures, this being high praise when we consider that the subject of scientific electrophysics and electrotherapeutics is almost a *terra incognita* to the majority of physicians.

This valuable method of treatment is applicable in what appears at first sight to be opposite conditions. Its stimulating effect in atrophic conditions, such as ozena, is so marked that when properly applied I consider it of more value than all other methods of treatment excepting cupric electrolysis, which, also founded on the application of electricity, adds the germicidal effects of the cupric salts to the stimulating effect of the application.

In congested conditions of the mucous membrane of the nose, which is probably present more frequently than all other pathologic conditions, a mild galvanic application stimulates the circulation by its tonic effects on the vasomotor nerves, and, unlike the effects of the electrocautery, is followed by a return to the normal condition without being dependent on the cicatricial tissue for restoring the normal patulency of the nostril. The principle of the application of galvanism and faradism in paralysis is so similar in this region, to that observed in other parts of the body, that it will be here necessary only to allude to its value in this connection.

Cataphoresis has been used in the treatment of goiter with fairly satisfactory results, although it still leaves much to be desired. It is useful in applying cocain to the ear for its local anesthetic effect. I have for some time also applied it in the treatment of sclerotic conditions of the middle ear, but my cases thus far have not been sufficient to justify my formulating any conclusion as to its therapeutic effects.

Electrolysis has been used in cases of fibroid tumors of the nose and throat, and has been considered by some to be superior to all other methods, as the great disposition to recurrence appears to be diminished in this method. Although but little used, electrolysis is an excellent substitute for the electrocautery in hypertrophies and other conditions for which the latter is used almost exclusively.

Several investigators have experimented in the application of galvanism to the auditory nerve for its diagnostic as well as for its therapeutic effect. The results have been by no means harmonious, although those who have had the greater experience in the application of electrotherapeutics believe it to be of value. The reaction of the acoustic nerve to electric excitation was first investigated in a scientific manner by Brenner, and afterward by Neftel, and more recently Gradenigo has followed up this line of research. This subject, however, is still in an embryonic condition, hence the incompleteness of electrotherapeutic methods in affections involving the auditory nerve or the internal ear. This subject presents a field which has been much neglected, but which will probably reward the intelligent research of men whose scientific training as well as medical knowledge has fitted them for this line of investigation.

Electricity affords a useful form of energy for operating various mechanical appliances used in the treatment of diseases of the nose, throat and ear. This refers especially to vibratory and pneumomassage, which have recently received considerable attention. In the treatment of diseases of the nose, vibratory massage is a useful substitute for the more heroic methods, and electricity has so much facilitated its application that it is now rarely used otherwise, especially on this side of the Atlantic. Pneumomassage is also a useful adjunct to the method of treating certain ear diseases and, while it will probably not fulfill the expectations of its most sanguine advocates, has given undoubted good results when used within its proper limitations. Here also electric energy has facilitated the method and made its application more exact.

Thus far, electricity in the department of the nose, throat and ear diseases has been used only for its simplest effects, such as the cautery and illumination, both of which may be used with little or no knowledge of the principles of electrophysics and electrotherapeutics. Even here, ignorance of the most elementary knowledge of the subject has placed many a physician in an embarrassing position. The methods which require a thorough understanding of the laws of electrophysics have been applied within narrow limits only, and they have even been condemned by physicians whose experience has given them absolutely no opportunity for judging of their value. It is to be hoped that some portion of the longer period of study which is now obligatory in all the advanced medical colleges, will be applied in teaching the principles of electrotherapeutics, so that the

time will soon come when it will be given more attention, and so many physicians will be interested in the subject that it will receive the prominence which it deserves.

BASSINI'S OPERATION FOR RADICAL CURE OF HERNIA; SEVEN SUCCESSFUL CASES.*

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Ever since my association with the United States Navy, and especially my connection with its hospital practice, I have been impressed with the necessity of an operation which should be a radical cure for hernia, it being the opprobrium of both the army and navy medical service that so many enlisted men of both are discharged with this disability without any attempt at cure, due to the fact that the men decline operation —which they are permitted to do—because their attending surgeon could not promise them a cure, himself firmly believing that no operation could be performed which would ensure perfect ability to do duty. This has been the history of most cases in my operative experience of an earlier date, in which the operations of Wood and Wiitzer were the rule, which I early instituted in hospitals under my charge. But with the introduction of the operation of Bassini, a different result has been attained and it would now seem that we have a reliable operation, as free from danger as any that could be instituted, in the majority of cases really a radical cure, and presenting every probability of the enlisted men being returned to duty, in a sound condition, capable of performing any hard work involving strain, without danger of a recurrence of the hernia.

The reasons for performing this operation may be thus enumerated, and the advantages attained are: 1. For the physical betterment of the individual. 2. The saving of a life pension to the Government. 3. The retention in the service of valuable men, and men desirous of continuing in the navy and marine corps. 4. Under proper technic, the small percentage of recurrences—less than 1 per cent.—and trifling danger as regards life, in these otherwise fine physical specimens almost demand the operation as a duty. 5. The repeated drills in aseptic technic and its repeated accomplishment, inspire confidence in hesitating surgeons and will broaden their field of operative work generally. 6. The possibility of strangulation is made very remote.

OPERATIVE TECHNIC AND HISTORY OF CASES.

The usual preparations of dressing, patient, hands, instruments, etc., for aseptic work were taken. The wounds were kept as free from blood as possible by clamping vessels before they were cut. Some modification of Bassini's method was practiced. One or more sutures were introduced above the cord in the deep line. The cord and sac were separated, the latter opened, tied off high up, cut off and the stump put back into the abdomen. When no sac could be demonstrated, the component parts of the cords were identified and no tissue resembling a sac was seen. The conjoined tendon and Poupart's ligament were brought together with interrupted sutures of heavy chromicized catgut, one or two sutures placed above the cord as noted above.

The divided aponeurosis of the external oblique muscle was united over the cord with a continuous line of chromicized catgut sutures, and the skin edges adjusted with plain catgut. No irrigation was employed. The wounds were wiped out with warm normal salt solution. Catharsis was induced on the third day. The patients were kept in bed for three weeks.

During the first quarter of 1898, three cases were submitted to operation, with perfect results save in one case in which atrophy of the testicle occurred, due to acute epididymitis, and in a second, a congenital one, there was great difficulty in separating the sac from the cord, due to the inflammatory adhesions. A fourth case of incomplete indirect inguinal hernia easily reducible was operated on in the third quarter of the same year, and was completely successful, primary union of the incisions occurring on the fifth day. The remaining cases were operated on soon after the occurrence of the rupture in most instances, and were well fitted for the radical cure on that account. In some the hernias were little more than bubonoceles, and the intestine had not been extruded more than two or three times before operation. In some of these cases no sac could be demonstrated after careful searching.

CASE 1.—R. P. B., a landsman, aged 28 years, presented right oblique inguinal hernia which had been down but twice before operation, and said to have occurred as a result of lifting, three months before the operation. His general physique was excellent. The operation, April 19, 1899, was with ether, from which the patient reacted well.

No sac could be found, after a painstaking search. The post-operative condition was normal, the wound united by first intention, and the patient was under observation until June 3, when he was sent to duty, cured.

CASE 2.—A. A., an ordinary seaman, aged 49 years, presented left, incomplete, reducible inguinal hernia, said to have followed a strain induced by slipping on deck while carrying a heavy weight, about seven weeks before operation. His general condition was good. Operation was done on May 19, 1899, under ether, from which he reacted well. The sac present was removed. The post-condition was normal, and the wound united by first intention. The patient was under observation until August 5, when he was sent to duty, cured.

CASES 3 AND 4.—J. B. L., master at arms, 1st class, aged 35 years, presented double bubonocele. The hernias were said to have been first noticed after injuries received in the explosion of the *Maine*, fourteen months prior to operation. His general condition was excellent, and double operation was performed on May 19, 1899, under ether, from which the patient reacted well. The aponeurosis of the external oblique muscle on each side was extremely thin, and the transversalis fascia on each side was bulging forward. No sac could be demonstrated on either side. The post-operative condition was normal, the wounds united by first intention, and the patient was sent to duty, cured, on July 11.

CASE 5.—C. H. G., chief machinist, aged 35 years, presented left oblique inguinal hernia, reducible, said to have been first noticed after two days of "trying work on the feed pumps." His general condition was fair, and operation was performed on June 15, 1899, under ether, from which the patient reacted well. A dense sac was removed. The post-operative condition was normal. The wound united by first intention, and the patient is still in the hospital under observation. The result is perfect, and he is to be sent to duty shortly.

*Read at the Annual Meeting of the Association of Military Surgeons of the U. S., Kansas City, Mo., Sept. 27-29, 1899.
This paper will also appear in the "Annual Report of the Surgeon-General of the U. S. Navy."

CASES 6 AND 7.—J. S., coxswain, aged 28 years, presented reducible oblique inguinal hernia on both sides. The right was said to have resulted from exertion on a boat davit, eighteen months before operation, and the left appeared one month before. Both have been continuously retained with trusses. His general condition was excellent, and double operation was performed on July 27, 1899. The patient reacted well from the ether. No sac was demonstrated on either side. The postoperative condition was normal, and the wounds united by first intention. He is still under observation, but the result is perfect.

The herniotomies that were recorded in 1898 were performed admirably, by Assistant-Surgeon James R. Whiting, U. S. N., a satisfactory conclusion resulting in each case; all the men having been returned to duty, and no relapse has as yet been reported in any case.

The herniotomies of this year were all performed by Passed Assistant-Surgeon Charles F. Stokes, U. S. N. —my executive surgeon—and I can not too earnestly commend his care and skill, and do honor to his admirable technic and successful result in every case.

VASOMOTOR SYSTEM, AND THE IMPORTANCE OF THE DRUGS WHICH ACT ON IT, IN OPTHALMOLOGY*.

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A study of the pulse and vascular tension is of the utmost importance to the ophthalmologist. Although clinical reports and practice show that while very slight local eye symptoms are noticed, yet how seldom is the pulse recorded, even previous to a cataract operation or during the crises of a glaucoma. It would be well if all oculists would always report the tension of the pulse with the same care, and use the same signs which are used in regard to the eye. The scale would thus run from + 3 to — 3.

Rolling the artery under the fingers with varying pressures, or carrying the skin along longitudinally over the vessel, will decide the tension as well as the inequalities of thickness and density.

Ewart, in a classical work on pulse sensations, has proved that the tension may be best noted by the amount of pressure that will cause the pulse impression to pass from the distal to the proximal side. Although tension is the one attribute of supreme importance in the pulse, there are at least four others that must be noted, frequency, size, the condition of the arterial wall, and the characteristic shape of the pulse curve; whether its access is gradual or sudden, its crest's duration long or short, its subsidence abrupt or slow; note being taken whenever it is dicrotic.

The great vasomotor system is controlled by both augmentor and inhibitory nerves to the heart; as well as the vasoconstrictor and vasodilator nerves to the vessels. The augmentor and vasoconstrictor nerves are largely associated in their course with the sympathetic system.

If it is essential to the oculist to be able to estimate the pulse tension, it is of more importance to be acquainted with the drugs that will control this tension. Inflammation causes a paralysis of the vasoconstrictors, and the area involved is swollen with sluggish and poison-laden blood which, pressing on the nerves, causes pain and further obstruction. The sensible thing is to bleed the patient into his own vessels so that the hyperemic area will be drained of the sluggish fluid. Vasodilators, such as aconite, are used in tonsillitis, and the result is better drainage and less pain in the diseased parts. There is not as much fever, ordinarily, in the inflammations of the eye as in the tonsil, yet the vasodilators, properly handled, will do a surprising amount of good.

There is need of such remedies as bromid of sodium, acting as a vasoconstrictor of the vessels of the eye and brain, and of aconite to dilate the general vascular system; also strychnin, the tonic and regulator for the nervous system, and which prevents any depression that is apt to follow the use of any vasodilator. Such remedies in addition to saline laxatives and the local use of eserin may obviate the necessity of an iridectomy in glaucoma.

Opium and potassium iodid are efficient vasodilators. Dr. George F. Butler says he uses five minims of the deodorized tincture of opium every four hours for months. The dose is so small, he says, that there is no danger of forming a habit. Potassium iodid, so often used in eye diseases with such good result, may be efficient, not that the patient is always syphilitic, but that the contracted vessels are dilated.

Hare gives a list of vascular depressants in the order of their efficiency; amyl nitrite, nitroglycerin, veratrum viride, antimony, aconite, alcohol in large doses and jaborandi.

Haig has shown how the xanthins and uric acid in the blood act as marked vasoconstrictors. This shows how sodium salicylate and mercury favor the dilatation of the vessels under such circumstances and prevent high tension.

Eyes operated on for cataract have the tension suddenly removed from the choroidal and retinal vessels. The wonder is that there are no more cases of disastrous hemorrhages after the operation.

Wide dilation of the trunk vessels, with contraction of the vessels of the brain by the bromids, is the best preventive, of which all such patients should have the benefit. It would be safer if all operations opening the eyeball had this preliminary treatment.

Bartholow states that nitroglycerin stands in the front rank of remedies for anemia, and that a much larger quantity of blood is obtained by the tissues, while the mere giving of iron is one of the most common of therapeutic fallacies of the day, because of the contracted vessels. Nitroglycerin is transient in its effects and ought to be given in broken doses of one-thousandth of a grain, often repeated. Sluggish conditions of the retina, like retinitis pigmentosa and optic nerve atrophy ought to have this treatment, and it promises the best results in such delayed conditions as slow corneal repair after cataract extraction. Strychnin will be added to this, because it prevents side-tracking of the waste material and venous blood. Its tendency is to balance-wheel the body mechanism in all its parts, following an inflammation or a degeneration. It is like replacing the telegraph lines after a storm. It increases connections. The rule again is broken doses often repeated and effects carefully watched.

Atropin dilates the vast cutaneous system, and is thus one of our most efficient remedies for internal bleeding from nasal or other internal organs. As it dries up glandular secretion, it is suitable in bleeding from mucous membrane or internal glands. As to pilocarpin, experiment proves that it acts by paralyzing the vasomotor system. The increased action of the heart and flushing of the skin is due to the dilation of the arteri-

*Presented to the Section on Ophthalmology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

oles. DeWecker has shown how it brings about absorption and resolution in inflammatory eye diseases with effusion and exudation. DeSchweinitz has also shown its wide field of usefulness if used in broken doses.

In albuminuric retinitis and allied conditions, the salvation of the retina, as well as the life of the patient, may depend on the reduction of tension by the general dilation of the vascular system.

INTRANASAL ANGIOMA: BLEEDING POLYPUS OF THE SEPTUM.*

BY W. E. CASSELBERRY, M.D.

Professor of Laryngology and Rhinology in Northwestern University Medical School; Laryngologist to St. Luke's and Wesley Hospitals, etc.

CHICAGO.

A typical *angioma simplex* is composed of newformed, very tortuous blood-vessels, held together by a small amount of connective tissue and situated usually in the skin, e. g., nevus. The normal vessels of the part where it is situated may enter more or less into its formation, becoming dilated and tortuous, and it has therefore become customary to include in the class of angiomata tumors composed entirely of dilated preexistent vessels, although the term telangiectasis or telangiectoma is by some preferred to this sort of angioma where dilatation is more prominent than actual new formation.

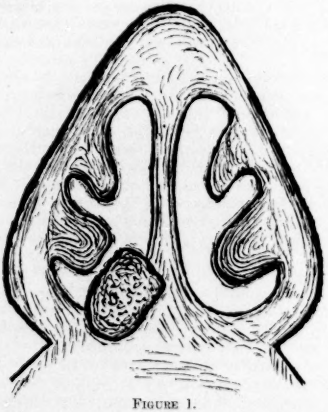

FIGURE 1.

A typical *angioma cavernosum* is composed chiefly of blood spaces lined with endothelium, separated by a stroma of connective tissue. The spaces contain venous blood, but seem to represent capillaries, being interposed between arteries and veins. The structure is similar to that of the corpus cavernosum. Such are often found in the liver.

The vascular tumors which grow on the septum narium do not conform exactly to either of these types. They contain both blood-vessels and blood spaces, thus far representing rather a combination of the two types, and they contain also a larger proportion of reticular connective tissue, with either round or spindle cells. In some this reticulum has a fibrillary character justifying the term angiofibroma. Among themselves, however, as occurring in this situation on the septum narium, they do present a tolerable uniformity of structure, the differences being variations in degree rather than of kind and, as their salient characteristic is extreme vascularity, they are best grouped under the term "intranasal angioma." The condition is exemplified in the following case:

Mrs. T., aged about 30, married, pregnant, has been annoyed for the past few months by frequent bleeding from the right nostril, and gradually increasing obstruction. Examination disclosed a soft, reddish, irregularly nodulated tumor the size of a small bean, attached by a rather broad pedicle to a small excrescence of the septum at the point of junction of the cartilaginous segment with the septal process of the superior maxilla, (Fig. 1) just within the nostril and close to the floor. It bled easily on contact with a probe. I removed it with a cautery snare and cauterized the base with chromic acid. Three weeks later one small vascular point, still unhealed and disposed to bleed, was again cauterized with chromic acid. There has been no recurrence for two years. The microscopic examination, made by Dr. R. H. Harvey, shows the tumor to be composed largely of blood-vessels and blood spaces. The blood-vessels vary in size and most of them contain more or less blood. Some are collapsed. The blood spaces are partly lined with epithelium. Between these vessels and spaces is connective tissue in which are numerous round

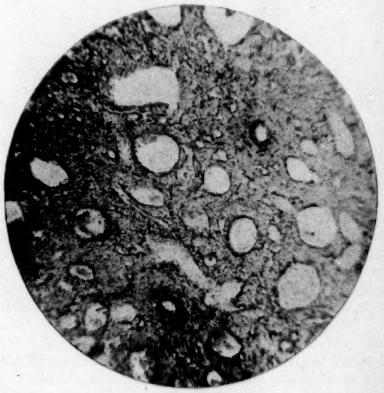

FIGURE 2.

and young connective tissue cells. On one edge of the tumor is a remnant of mucous membrane. The diagnosis is angioma. Microphotographs of sections under high and low power are appended (Figs. 2 and 3).

I can not think that these tumors are as rare as has been represented, although they have attracted little notice until recently, when, following Victor Lange[1] in 1892, papers have appeared by Schadewaldt, Alexander, Sheier and Heyman, all in the *Archiv für Laryngologie und Rhinologie* (Band I, 1894) under the title of bleeding polypus of the septum. Their detailed pathologic descriptions tally so closely with each other and also with that of my own case as above given, that they must all be the same sort of tumor, notwithstanding one is spoken of as soft fibroma, and another showing some glandular tissue as lymphangioma telangiectaticum. Since then Pierce[2] has reported a case under the name

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

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of telangiectoma the microphotograph of which seems to be identical with mine except that spindle cells are more prominent in the stroma than round cells. Cobb[3] in 1893, reported a case under the name of cavernous angioma, described as growing from the septum with large vascular sinuses and round cells in the stroma. He cites several cases from the earlier literature, but some of them are confused with other neoplasms, e. g., sarcoma.

I estimate that thirty or more bona-fide cases are reported, excluding those in which there was a sarcomatous element or in which they were simply vascular polypi growing from other situations.

The exact site on the septum has varied, but all were toward the anterior part and several at the base. The size is from that of a pea to a hazel-nut; if much larger one should strongly suspect sarcoma. The surface is nodulated or furrowed, but may be smooth, the color a mottled blue or red, and the pedicle either narrow or

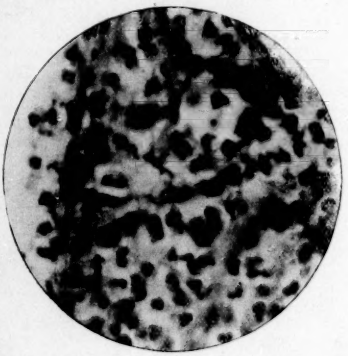

FIGURE 3.

broad. The salient symptoms are hemorrhage and obstruction. They show little tendency to recurrence if thoroughly removed. They are more frequent in females than males, in the proportion of 3 to 1. Sarcoma should be excluded by careful microscopic examination.

Cavernous angioma is also described[5] as occurring on the anterior and median portions of the inferior turbinated body. In this situation one must avoid confusing mere hyperplasia of the normal cavernous structure with a neoplasm, although the latter does occur and the illustration and pathologic descriptions given by Schwager[4] show it to conform closely to angioma as it occurs on the septum.

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3. Cobb: Trans. Pan-American Med. Cong., 1893, vol. ii, p. 1540.
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WITH THE January number, the *Woman's Medical Journal*, Toledo, Ohio, enters on its tenth volume. It shows every evidence of prosperity in its new cover, improved paper, new type and general make-up. The editorial staff has been enlarged, and Dr. Eliza H. Root assumes active editorial management. We congratulate the *Journal* and its readers, and wish it continued prosperity.

A CASE OF CARCINOMA OF THE NASAL PASSAGES.*

BY J. L. GOODALE, M.D.
BOSTON.

Mr. J. A. S., a commercial traveler, 51 years of age, was referred to me by Dr. F. E. Cheney of Boston, June 4, 1898.

Previous History.—For thirty-three years the patient had had nasal polypi removed at regular and frequent intervals from the left nasal passage, by various physicians, and within the past few years also occasionally from the right side. Otherwise the health had been good. There was no evidence of syphilis.

Present Illness.—Six months ago the polypi on the left side were said to have become firmer and their removal attended with more bleeding than formerly. The left eye simultaneously became painful and began to exhibit protrusion from the orbit. A progressive impairment of flesh and strength was observed.

Examination.—He was well developed and fairly well nourished. The right nasal passage contained a few small polypi; the left was nearly completely filled with small and large masses, all having the appearance, clinically, of ordinary polypi, with the exception of a pale red mass, the size of an almond, springing from the region of the infundibulum, of firm consistence and adherent in places both to the septum and the external nasal wall. After breaking down the adhesions, the greater part of this mass was removed with the cold snare. The hemorrhage was moderate and easily controlled.

Microscopic examination was made by Dr. J. H. Wright, pathologist to the Massachusetts General Hospital, and showed the specimen to consist "essentially of connective tissue inclosing numerous groups and masses of moderate-sized, vesicular, nucleated cells, closely packed together. The connective tissue is in places dense and fibrous, and other places it is loose and presents the appearances of the reticular tissue of nasal polyps. Here and there in the midst of the connective tissue small irregular islands of atypical bone tissue are present. Diagnosis: carcinoma."

Owing to the extent of the disease, a radical operation was not advised. During the next few months a large amount of carcinomatous tissue was removed intranasally. Recurrence was rapid, and the impairment of flesh and strength became continually more apparent. The exophthalmus became extreme, and the pain in the orbit required several grains of morphin daily. There was no evidence of the disease invading the structures of the eye.

The death of the patient was reported to me as occurring April 19, 1899. The history of malignancy thus extended over a period of fifteen months.

REPORT OF A CASE OF ECHINOCOCCUS CYST OF THE NOSE.*

BY W. K. ROGERS, M.D.
COLUMBUS, OHIO.

The subject of this report, Mrs. W. M. S., was referred to the writer by Dr. Hatch, of Newark, Ohio, April 29, 1895, for the removal of what seemed to be a rather large fibroid polypus nearly filling the vault of the pharynx. It was attached to the septum, on the left side, near its posterior extremity, and nasal breathing could

*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

not be accomplished. Growing from a point near the posterior extremity of the left middle turbinated body was another tumor about one-half an inch long and one-quarter of an inch thick, much softer, and differing in no way from an ordinary mucoid polypus in appearance. Both were removed; the former by means of forceps, through the mouth, and the latter with a cold wire snare through the nose. The stump of each was touched with a galvanocautery point, and under Dr. Hatch's care the surfaces healed satisfactorily.

On account of the rather unusual firmness of the pharyngeal mass, it was subjected to microscopic examination, but found to consist of nothing unusual. The tumor from the turbinated body looked so commonplace that nothing was thought of it, and it escaped examination.

The patient was subsequently seen two or three times in as many months, without any sign of recurrence being noted.

On Dec. 9, 1897, two years and eight months after the operation, the patient again called, having for some time observed evidences of obstruction. She stated that two months prior to this visit a violent effort to get rid of the stoppage, by blowing the nose, had resulted in its disappearance, and the expulsion of a considerable amount of almost clear straw-colored fluid. The relief was only temporary, and examination showed what again looked like a mucous polyp, rather softer than usual, and evidently containing fluid. Its attachment, as nearly as could be made out, was the stump of the original growth in the nose—not the fibrous mass in the pharynx. During its removal with a cold wire snare—through the nose—it was ruptured, so that its size could not be accurately estimated. It was at least as big as a large almond, single, and irregular in shape. A microscopic examination showed that the walls contained numerous echinococcus hooklets. The stump was cauterized as before, and two years later there had been no recurrence.

It may be of interest to note that careful inquiry failed to elicit any evidence of intestinal parasites. The patient was under 34 years old, and in good general health.

I believe a similar case was recorded in Sajou's Annual some years ago, but I have been unable to find the account, and it is the only other case of which I have heard.

CONTRIBUTIONS OF THE MEDICAL PROFESSION TO GENERAL LITERATURE AND COLLATERAL SCIENCES.*

BY GEORGE R. HIGHSMITH, M.D.

CARROLLTON, MO.

This is an age of progress, in which the genius and untiring labor of the philosopher, the scientific thinker and the patient investigator have laid broad and deep the foundations for a higher and happier civilization than the world has hitherto known. There has been an intellectual advancement, a moral uplifting, an ethical awakening, and a quickening of perception, which have led to the proper recognition of the duties and responsibilities of an enlightened citizenship. A broader and truer imperialism has been inaugurated; intellectual expansion has become a fixed policy of the entire profession, and the dream of happiness, through fraternity, freedom, justice and humanity seems to be realized.

There never was a time in the history of the world when knowledge was so easily accessible, and so eagerly sought after by the entire profession. The plodding country practitioner, located at the cross-roads, is as near the "springs of Helicon," and drinks as deep as his city brother. There never was a time, in my opinion, when the individual influence of the physician was greater; there never was a time when the future of the medical profession was brighter with promise. The history of medicine is the history of progress in all departments of learning.

It was not until about the middle of the seventeenth century that the clerical element was divorced from medical circles. In fact, for some time after, in looking up the individual history of the physician, one is struck by the frequency with which the study of theology is referred to as a preliminary to the study of medicine. Many men who became eminent as medical practitioners were originally intended for the church.

About the time of Charles II of England, the medical profession first began to hold a place in general literature. About this time the so-called "wits" began to be the fashion. A man was nothing if not a wit, and if he had a reputation for wit he could be a drunkard, gambler and libertine combined, without losing his place in the court circles of Charles II. Every age has had its wits, but they were so numerous then as to distinguish the era by a special brilliancy, and the periods most abounding in them have been those most free from wars or other active political disturbances. The early period of the Augustan age, the Restoration and the commencement of the Hanoverian dynasty have all been enlivened by wits, who came to light like mushrooms after a storm of rain, as soon as the political horizon was clear. These men were the offspring of the particular times in which they figured; at earlier periods they would have been considered effeminate—at later, absurd. About this time clubs and coffee houses were inaugurated. Among the physicians who ranked as wits, and who obtained a reputation in literature were Walter Charleton, Sir Samuel Garth and John Arbuthnot. Walter Charleton, 1619-1707, was physician to Charles II, and president of the College of Physicians, London. He was the author of "A Brief Discourse on the Different Wits of Men," in which he attributes the varieties of talents among men to the difference in the form, size and qualities of their brains. He also was a writer on theology, zoölogy, physics and antiquities. He translated the "Morals of Epicurious."

Sir Samuel Garth, 1670-1718, was a man of great wealth and learning. He became a member of the College of Physicians, London, in 1691. He was the first physician of prominence to advocate the establishment of free dispensaries for the poor. By this he gained the animosity of the College of Physicians, in consequence of which he published "The Dispensary," a mock heroic poem in six cantos, which was an instant success, passing through three editions the first year. He published "Claremont," a moral epistle in verse. He was a very genial character; "Well Natured Garth," Pope called him. Pope also said that he was "as good a Christian as any man living, without knowing it." Dr. Garth was a member of the famous "Kit-kat" Club, to which he gained admission by reason of a eulogy on King William, introduced into his Harveian oration in 1697. It was Garth who extemporized most of the verses inscribed on the drinking cups of the "Kit-kat" Club, and which are preserved to this day. Dr. Garth was the principal physician of the Whigs, and physician-in-ordinary to the King; he followed the Duke of Marlborough through all the vicissitudes of his career; was knighted

*Address of the President delivered at the Forty-second Annual Meeting of the Missouri State Medical Association, held at Sedalia, May 17-19, 1899.

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by George I, in 1714, with the Duke of Marlborough's sword, and delivered the oration at the funeral of the poet Dryden.

John Arbuthnot, 1667-1735, took the degree of M.D. at the University of Aberdeen, and immediately went to London for the practice of medicine. In 1704 Prince George of Denmark was taken suddenly ill; Dr. Arbuthnot, being near at the time, was called to attend him, and afterward continued to be his physician. In 1705, at the request of Queen Anne, he was made her physician-extraordinary, and four years later was made royal physician-in-ordinary. He was now in the very center of the literary society of the time, and his great talent, massive learning and brilliant wit enabled him to take a prominent place. He was on intimate terms with Pope, Gay, Swift and Parnell, and he quickly became one of the foremost literary men of the Tory party. In 1712 appeared the celebrated political allegory, called "The History of John Bull;" it is from this that the term "John Bull" as applied to the English nation was derived. At the time this work appeared it was generally attributed to Swift, but passages in Swift's own letters make it quite sure that Arbuthnot was the sole author. He belonged to the "Scriblerus Club;" the first book of the "Memoirs of Martinus Scriblerus," published in Pope's works, is undoubtedly the work of Arbuthnot; it is an admirable combination of wit and learning, and is considered one of the finest specimens of sarcastic humor in the English language. Arbuthnot continued the practice of medicine as long as he lived, although at the death of Queen Anne he lost his place as court physician. He attained great eminence in his profession and in 1727 delivered the Harveian oration.

Among physicians who contributed to general literature and science during this period, and who do not belong in the class of wits, were Sir Thomas Browne, Henry Vaughan and Sir Richard Blackmore.

Sir Thomas Browne, 1605-1682, was the most learned physician, and the most prominent literary man of his time. He took the degree of B. A. at Broadgate Hall, Oxford, in 1626, and the further degree, M. A., in 1629, then studied medicine and practiced in Oxfordshire. About 1633 he left England and traveled through Ireland, France and Italy, and on his way home received the degree of M. D. at the University of Leyden. In 1642 he published "Religio Medici," or "The Religion of a Physician." Its success was very great and the author at once became celebrated as a man of letters. In 1646 he published "Pseudodoxia Epidemica," or "Enquiries into Vulgar Errors." In 1658 appeared "Urn Burial" and the "Garden of Cyrus." In 1651 he was knighted by Charles II. His form of thought is peculiar and remarkable, and his style unique, rich with a lavish use of metaphor and allegory. His "Religio Medici" is considered his best work, his "Vulgar Errors" shows great research; but the whole strength of his genius, and the wonderful charm of his style are to be found in "Urn Burial," the concluding chapter of which, for richness of imagery and majestic pomp of diction can hardly be paralleled in the English language, unless it may be in the sublime passages of Milton's prose.

Henry Vaughan, 1621-1693, was born in Wales, but studied melicine in England and practiced for the most part in London. He published a volume of poetry before he began the study of medicine. He began to practice medicine at 28 and continued in it as long as he lived. He wrote "Mount of Olives," a mystic prose work; but is best known as the author of the poems, "The Retreat," "The World," and "Beyond the Veil."

Sir Richard Blackmore, 1650-1729, was educated at Westminster and Oxford, graduated in medicine at Padua, and settled for practice in London. In 1697 he was chosen one of King William's physicians, which office he held for some time. Blackmore had a passion for writing epics; no fewer than seven being published between 1695 and 1723; "Prince Arthur" in 10 books; "King Arthur" in 12; "Eliza" in 10; "Creation" 7; "Redemption," 6; "Nature of Man," 3; and "Alfred" in 12. Addison and Johnson praised him highly, Johnson saying that "his name would be transmitted to posterity as the first favorite of the English muse."

During the first half of the eighteenth century physicians began more and more to attach themselves to political parties, or court favor and patronage of men of rank. The Whig and Tory parties each had their physicians, as well as each club and coffee house. By the middle of the eighteenth century, most of the physicians and surgeons of the better class had either assumed offices and positions in which they were supported by the state, or were settled by their noble patrons in permanent residences. Some of them were supplied with large libraries, either by their patrons or by the government, and most of them enjoyed moderate prosperity.

Intellect had marched forward with gigantic strides, among writers wit had, in a measure, given place to satire. Dr. John Armstrong and Dr. Mark Akenside held the boards as contemporaries of Oliver Goldsmith, Tobias Smollett, Horace Walpole, Richard Brinsley Sheridan, David Garrick, Samuel Johnson, *et id omne genus*. Clubs and coffee houses were still a prominent feature of literary and scientific circles, but the character of the company had changed; there was a mingling of aristocracy with talent, the blending of ranks by force of intellect; the assembling not only of all the celebrities that Europe could boast, but all from the whole civilized world that could enhance private enjoyment; company was not selected for rank, but for peculiar merit or acquirements; pomp and wealth were made subsidiary to the true luxury of intellectual conversation. The famous literary club of which Johnson was the autocrat was at its zenith.

John Armstrong, 1705-1779, graduated at the University of Edinburgh and soon afterward settled in London. In 1746 he was appointed one of the physicians to the hospital behind the Buckingham House, and in 1760, physician to the army in Germany, which appointment he held until the peace of 1763. His first publication, "An Essay for Abridging the Study of Physic," was published in 1735. It was a satire on the ignorance of the apothecaries and medical men of his day. Two years later he published "The Economy of Love," the indecency of which very much damaged his professional practice. In 1774 appeared his "Art of Preserving Health," a didactic poem on which his reputation as a literary character rests. He also published about this time, a volume of "Miscellanies," which displays considerable humor and powers of observation.

Mark Akenside, 1721-1770, author of "Pleasures of Imagination," was the son of a butcher. In his nineteenth year, being intended for the church, he entered the Theological School of the University of Edinburgh, but like many young men of his time, he changed his mind and transferred from the theological to the medical department. In 1740 there was organized a medical society and debating club combined. Akenside became a member, and Dugald Stewart says that Robinson, the historian, used to attend in order to hear Akenside's speeches, so famed was he in oratory.

In 1743, the publisher Dodsley came to Pope for his opinion, with a bundle of manuscript for which the writer wanted £120. After reading the manuscript, which was "Pleasures of Imagination," "the oracle of Twickenham" advised the publisher to make no niggardly offer, as this was no "every-day writer." In his 23d year, like Byron, he awoke and found himself famous. He went to Leyden and pursued his medical studies with ardor, and in 1774 obtained the degree of M. D. His thesis describing the formation and growth of the human fetus was characterized by originality and acute observation. In 1773 the University of Cambridge bestowed on him the degree of Doctor of Medicine. In 1754 he was elected Fellow of the College of Physicians; in 1775 he delivered the Goulstonian lectures; in 1756, the Croonian lectures; in 1759 he was chosen chief of St. Thomas Hospital, and in 1760 he delivered the Harveian oration. In 1761 he changed his politics from Whig to Tory, which added "renegade" to his name. He was a man of great personal vanity, which often brought him into ridicule. Akenside furnished the original from which the doctor in Smollett's "Peregrine Pickle" was drawn. His fame as a poet is secure; some of his minor poems are characterized by a classic grace and charm of expression.

Passing to the latter half of the eighteenth century and the first half of the nineteenth, we find a long list of those who have enriched literature and science by their contributions. Among the illustrious names of this period we find Erasmus Darwin, Henry Dearborn, James Currie, John Wolcott, Thomas Brown, James Gates, Percival and Charles Lever.

Erasmus Darwin, 1731-1802, physician, scientist and poet, took the degree of M.D. at the University of Edinburgh, and settled as practicing physician in Litchfield, England, where he gained a large practice. While here, it is said, he did much to diminish drunkenness among the inhabitants; he is said to have been a good eater but drank nothing except water. In 1781 he removed to Derby, where he spent the remainder of his life. He wrote "The Temple of Nature," "The Shrine of Nature," and "The Botanic Garden," the second part of which, "The Loves of the Plants," furnished the occasion for Canning's clever caricature, "The Loves of the Triangles." He was also the author of a scientific work, "Zoonomia," which contains a system of pathology, and a treatise on generation, in which very nearly the same ideas are advanced as underlie the modern theory of evolution. Erasmus Darwin said: "Would it be too bold to imagine that in the great length of time since the earth began to exist; perhaps millions of ages before the commencement of the history of mankind; would it be too bold to imagine that all warm-blooded animals have arisen from the same living filament, which the great First Cause endued with animality, with the power of acquiring new parts, attended with new propensities, directed by irritations, sensations, volitions and associations, and thus possessing the faculty of continuing to improve by its own inherent activity, and of delivering down these improvements by generation to its posterity, worlds without end, . . . and that one and the same kind of living filament is and has been the cause of all organic life?" May not Charles Darwin be more indebted to his illustrious grandfather, who did his writing and thinking as he journeyed from one patient to another, than many of us suppose? May not his love of nature and his capacity for investigation and the facility with which he classifies facts and formulates theories, be partly at least due to the hereditary transmission of genius? How much may Huxley, Tyndall, Spencer, Haeckel, Helmholtz and other apostles of evolution be indebted to this modest practitioner of medicine? When we take into consideration the poverty of the English language at that time, especially in scientific terms, how much difference in the meaning exists between the above quotation from Erasmus Darwin and Tyndall's expression: "One single atom of protoplasm contains the power and potency of all things?" The poetical reputation of Darwin was as bright as the plants and flowers which formed the subject of his verse. Cowper praised his song for its rich embellishments, and said it was "as strong as it was learned and sweet."

Henry Dearborn, 1751-1829, was a practicing physician in Portsmouth, N. H., at the beginning of the American Revolution. Immediately after the battle of Lexington he raised a company of sixty men and joined the American forces at Cambridge. He continued in the army until the close of the war, and was mustered out with the rank of general. He then returned to his practice, but was soon made marshal of the district of Maine. The remainder of his life was spent in office; he was Secretary of War from 1801 to 1809; he served two terms in Congress, and was minister to Portugal from 1822 to 1824. His literary work consists of official reports in the several capacities in which he served, and are said to be models in a literary sense.

James Currie, 1756-1805, was born in Dumfriesshire, Scotland. Being destined for business, he was sent at an early age to the colony of Virginia in America. In consequence of having written a series of letters to an American journal, over the signature of "An Old Man," in defense of the "mother country," he found it would be more comfortable for him to return to Scotland, which he did in 1776. He at once began the study of medicine, and in 1780 took the degree of M.D. at Glasgow. He settled at Liverpool for practice, and in 1783 was elected physician to the infirmary. Among Currie's literary works may be mentioned a Tory pamphlet signed "Jasper Wilson," which ran through several editions, and "Medical Reports on Effect of Water, Cold and Warm," etc. But he is best known as the editor of an edition of Burns, with an introductory criticism, and an essay on the "Character and Condition of the Scottish Peasantry."

John Wolcott, 1758-1819, with the pseudonym "Peter Pindar," received the degree of M.D. at the University of Aberdeen in 1767. In 1769 he accompanied Sir William Trelawny, who had been appointed governor of Jamaica, to the West Indies. On the death of his patron, in 1772, he returned to England and settled as a physician at Truro. In 1781 he gave up the practice of medicine, removed to London, and turned his whole attention to literature. His special *forte* was satire, and George III was his favorite subject for ridicule. He wrote "Lousiad," "Peeps at St. James," and the "Royal Visit to Exeter," in the last of which he depicts the king's wonder as to how the apples got in the dumplings. He ridiculed "Boswell's Life of Johnson" in an "Epistle to Boswell," and in "Bozzy and Piozzi." In 1795 he disposed of all his works to the book-sellers, for an annuity of £250 a year. His satires are said to have had such an effect on public opinion that he was offered a pension by the ministers of the government if he would refrain from further ridicule of the king. His humor was broad and deep, and he was endowed with wonderful facility of expression.

Thomas Brown, 1778-1820, was a Scotch psychologist, physician and poet. He began the practice of medicine

in 1806. In 1809 he obtained a professorship in Edinburgh, in the University, and he lectured on mental and moral philosophy. He is said to have been a very fascinating lecturer. His mind was quick and active, and there was not one of his lectures which did not contain some new doctrine, or some new and striking application of the old. He died at the age of 42. What a mind of such subtility and fertility might have accomplished had the thinker been spared a little longer, it is hard to say. His best poem is "Paradise of Coquettes." His poetry shows delicacy of touch, fineness of feeling and sweetness of diction.

James Gates Percival, 1795-1856, was a native of Kensington, Conn., graduated at Yale in 1815, at the head of his class, taught school for a while, then studied medicine and located in Charleston, S. C. In 1824 he was appointed assistant-surgeon in the United States Army, and was made professor of chemistry at the U. S. Military Academy. In 1822 he published "Prometheus," and "Clio;" in 1826 two volumes of poetry, and in 1843 his "Dreams of a Day." In 1854 he was appointed geologist of Wisconsin, in which office he died two years later.

Charles Lever, 1806-1872, obtained a degree at Trinity College, Dublin; later he studied medicine and received the degree of M.D. at Goettingen. He then visited the United States, where, it is said, he sojourned among the Indians, adopting their dress and mode of living. He practiced medicine at Kilrush, County Galway, and other places in Ireland. He then went to Brussels with a letter to the secretary of the English legation; although not formally appointed, he acted as physician to the legation for some time. He early began to write and publish short stories, according to his statement, not with any hope of becoming celebrated as a literary man, but with the view of securing attention and gaining friends to further his success as a physician. These short stories were afterward utilized for many of the principal incidents in his successful novels, especially "Harry Lorequer," "Charles O'Malley," "Con Cregan" and "The Knight of Guynne." In 1842 he retired from the practice of medicine and devoted the remainder of his life to literature. Lever always claimed that all his characters were drawn from life, in many instances taken from his most intimate associates. In 1858 he received a government appointment and continued in office as long as he lived.

(To be Continued.)

Clinical Report.

REPORT OF RECOVERY FROM TRAUMATIC TETANUS.

BY L. B. VAN CAMP, M.D.
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OMAHA, NEB.

As the percentage of recoveries from tetanus is exceedingly small, a report of the treatment and successful recovery of a patient, afflicted with a most severe siege of the disease, may be of interest.

On Sept. 9, 1899, a German farmer boy, aged 15 years, was brought to the Douglas County Hospital, exhibiting most severe symptoms of lockjaw. His history, as given by him, was as follows: Three weeks previously, while working on a farm, he had received a cut with a corn-knife, between the first and second toes of the right foot. He complained of nothing for ten days after the injury. At noon on the eleventh day, while at the dinner table, he found that he could not completely close his lower jaw. His condition grew worse and, on the fifteenth day after the injury, he was seized by a severe chill followed by a violent contraction of the muscles of the back, causing him to fall on his face, and rendering him unable to rise.

He was sent to this hospital, where he came under my observation. He was then having a paroxysm every five minutes and even oftener on the slightest provocation, as for example, a footfall or the entrance of anyone into the room. His abdomen felt like a board, his whole body was rigid, there was, in a word, orthotonos. He had also the risus sardonicus, his temperature was about 101, his pulse 96, and he was very constipated. I ordered him thoroughly bathed in warm water, and placed in a dark room, where he could be kept quiet. As the slightest noise caused him to have a paroxysm, he was kept under the influence of morphin sulphate, as well on this account as because he complained of severe pain in the back at each paroxysm. Hyoscin hydrobromate and potassium bromid were also used, but with an unsatisfactory result. His constipation was overcome by calomel followed by a saline, or, when these remedies failed, by an enema. The principal treatment consisted, however, of the injection of tetanus antitoxin. On the first day at the hospital, which was the third day of paroxysms, I injected 10 c.c. of the antitoxin hypodermically between the scapulæ. The following day there was very little improvement, so 10 c.c. more was injected into the lumbar region. On the third day there was some improvement—the paroxysms were not as frequent or as severe. Opisthotonos, which was well marked from the beginning, still prevailed. Morphin hypodermically was still resorted to for allaying the pain and controlling the paroxysms.

On the fourth day after the first injection, there was considerable improvement; the patient could open his mouth a little for the first time since he had been in the hospital. The paroxysms were growing less frequent and less severe. The antitoxin was again administered in the lumbar region. On the fifth day there was a decided improvement—the mouth could be opened half way, the paroxysms were less painful, and occurred not more than two or three times in an hour. Another 10 c.c. of the antitoxin was administered—making in all 50 c.c. On the sixth day the symptoms had so far ceased that another injection was deemed unnecessary. The patient was now able to take nourishment, which was of a liquid form at all times, without the use of a rubber tube, which had been used previously, when his mouth was within an eighth of an inch of being entirely closed. On the tenth day after the first injection, he was able to sit up in bed; and on the fifteenth day after the antitoxin was first given he was discharged from the sick ward.

Closure of Abdomen.—Montgomery, in the *Medical Age* for Dec. 25, 1899, advocates suture of the separate layers in abdominal operations, to guard against ventral hernia occurring. He first introduces a continuous catgut suture of the peritoneum, then passes interrupted silkworm gut sutures through the overlying tissue, these also passing through the projecting edges of the peritoneum between the suture introduced. A continuous catgut suture is used to coaptate the edges of the aponeurosis, and then the skin sutures are tied, but not tightly enough to produce great tension. The cut ends of the latter are left three or four inches long and, while they are held up, a wet bichlorid dressing is applied over the wound and around the sutures. Left this length, they act as drainage, where a little oozing occurs; they also facilitate removal.

Therapeutics.

Rational Treatment of Delirium Tremens.

The treatment of delirium tremens, as practiced by many physicians, is far from satisfactory, and he who will look up various authorities for light on the subject will be puzzled and bewildered by many conflicting and contradictory statements. As in all diseases of which the treatment is more or less empiric, we have here enthusiastic advocates for various methods, each of which is considered to excel the other.

One physician will assert that he can readily cure the disease by his special d. t. mixture, which in nearly every case is a combination of powerful sedatives. He says: "Put the patient to sleep and the disease is cured." Others, remembering cases that have died of sudden heart failure, consider this "sleep-at-any-price" treatment extremely dangerous, and believe that stimulants should be employed at the very beginning. Many physicians consider the sudden withdrawal of alcohol as the cause of the attack and advocate the administration of alcohol in gradually diminishing doses; while others allege that sudden and complete withdrawal of alcohol is the first essential in the treatment, substituting large doses of strychnin or digitalis. Other practitioners, believing that the disease is a toxemia, advise elimination through the skin, bowels and kidneys and recommend feeding only after thorough elimination. Again, other clinicians affirm that the best treatment is to produce emesis by means of tartar emetic or apomorphia, followed by a cold bath. And there are those who discard all the above methods as useless and assert that delirium tremens is a self-limited disease, and that the patient either recovers, in spite of the treatment, or dies from exhaustion or starvation, and that proper restraint and careful feeding are the only important measures worth considering.

It appears to us that the rational treatment of delirium tremens should be both etiologic and symptomatic.

ETIOLOGIC TREATMENT.

The two apparently conflicting views as to the causation of delirium tremens are:

1. That it is a psychosis, i. e., a functional disturbance of the mind, the mental equilibrium being weakened by the excessive use of alcohol, any one of the numerous exciting factors serving to precipitate an attack, such as injuries, mental and physical shock, intoxications, sudden withdrawal of alcohol, etc.

2. That it is an intoxication, the symptoms depending on the presence in the system of irritating poisons. These poisons may be of various kinds; they may be retentive products due to renal insufficiency, intestine toxins, or the intoxication of an infectious disease. Certain it is that toxemias, as those of erysipelas, pneumonia or suppuration, produce in the drunkard a delirium identical with delirium tremens.

While not attempting to decide in favor of either theory, it appears that a combination of the two would explain the great majority of the cases. It is quite probable that we have to deal with an unstable nervous system suffering under the effects of an intoxication. The practical application is this: Recognizing the psychic factor—an unstable nervous system—as a prominent element in the disease, we would guard the patient from shock, injury, or excitement by placing him in charge of one or two good, strong, trained attendants who are able to soothe and divert his mind or physically able to restrain him without the use of violence. Believing intoxication to be the exciting factor, all cases should receive energetic eliminative treatment, by means of active catharsis, hot baths, and, in the robust, free diaphoresis. All drugs which tend to check secretions, e. g., opium, are contraindicated, and from practical experience we can say that cases do poorly under the opium treatment. Poisonous drugs should be administered with great moderation and caution. Especially would we refrain from using alcohol. The idea that the sudden withdrawal of alcohol is the cause of the delirium appears to be a fallacy: 1, because of the history in many cases of constant and excessive drinking up to the onset of the most severe symptoms; 2, because prison, asylum, military, and hospital experience shows innumerable cases of chronic alcoholism in which the alcohol has been suddenly cut off without producing delirium tremens; 3, because patients treated with alcohol during an attack of delirium tremens certainly do no better and usually worse than those treated without it.

SYMPTOMATIC TREATMENT.

In delirium tremens, more than any other disease, it is necessary to remember that we "treat the patient and not the disease." There is in these cases loathing of food and drink, and at the same time expenditure of energy, factors which tend to cause the fatal result.

Feeding is of the greatest importance, not only to prevent exhaustion and cardiac failure in the later stages of the disease, but also because the patient is usually in a half-starved condition, having as a rule taken little food for a considerable time before the onset of acute symptoms.

The patient will usually take the following mixture: Tinct. capsici, m. xv, in a cupful of hot milk every 3 or 4 hours. This will "settle his stomach," acting as a local as well as general stimulant, and is all the nourishment necessary in most cases. If the patient refuses all food on account of his delusions, a nasal tube should be passed and fluid food introduced into the stomach at intervals of not more than three hours. If vomiting occurs, a mixture of equal parts of matzoon and seltzer is sometimes retained. Persistent vomiting is to be combated by ice, effervescing draughts, lime-water, and careful feeding in small quantities; at the same time giving nutrient enemata.

To control the delirium and terror of the patient, his excitement, restlessness and sleeplessness, the cautious administration of hypnotics appears certainly indicated. The following is beneficial:

℞ Chloralis ..... ℥iv
Potassii brom. ..... ℥iv
Tinct. hyoscyami ..... ℥iv
Aquæ chloroformi, q. s., ad ..... ℥iv
M. Sig. Dessertspoonful every 2 hours until quiet or until 3 doses are given, then every four hours, as required.

In the prodromal stage, when the symptoms are slight but characteristic, the attack has apparently been aborted in numerous instances by the above treatment. If, after a fair trial, probably 6 or 8 doses of this mixture, the patient has not obtained sleep, and the absorptive power of the stomach seems impaired, or if the delirium is violent, hypodermatic administration of hyoscin hydrobromate in doses of 1/100 gr. every hour for three doses may be employed. This rarely fails to quiet the patient and produce sleep. Should it fail, however, and the delirium be excessive, rapidly exhausting the patient's strength, ether anesthesia is often efficacious.

The proper restraint is very important. The best method is to place the patient in a cool, quiet, dark, well-padded room with a mattress on the floor and two strong nurses in constant attendance. Where this is impossible, mechanical restraint becomes necessary. Sheets tied across the bed are not efficient. The use of leather straps to wrists and ankles is far from being satisfactory, for the patient will often abrade his skin or even break bones and exhaust his strength in his attempts to free himself. In some cases this strapping appears to convert a mild attack into a severe and even fatal one. A wire cage, just large enough to cover the patient's body as he lies in bed, but too small to allow him any range of motion, is used at the Alexian Brothers' Hospital, in this city, and, it is claimed, with excellent success.

Throughout the treatment the heart must be carefully watched, and on sign of impending exhaustion, strychnin sulphate, 1/30 gr., hypodermically every four, or even two hours, should be given.

Tincture digitalis in large doses is especially efficient in cases where the heart is weak and there is profuse perspiration.

In sudden collapse, the administration of a hypodermic barrelful of aromatic spirits of ammonia, camphorated oil, or both, will be found useful.

If there be a rise of temperature the cold bath will not only reduce the temperature, but also, frequently allay the delirium. Should there, however, be any sign of heart failure, the bath should be preceded by stimulation.

Apomorphin, hypodermically, in sufficiently large doses to produce vomiting, has again been recently recommended in medical journals, as a specific, but the writer has tried it in several cases without any appreciable result.

The disease is self-limited; and, unless death or complica-

tions occur, amelioration of the symptoms may be looked for in from 2 to 4 days. When convalescence begins, attempts should be made to break the drink habit by moral suasion, the administration of nux vomica, capsicum, and the like, a diet consisting largely of fruit, and, if necessary, the committing of the patient to a retreat for the cure of drunkards, followed by a total change in his mode of life.

That the reader may learn of the treatment recommended by other physicians the following prescriptions are given:

FOR ALCOHOLISM.

℞ Strychninæ nitratis ..... gr. viii
Acidi salicylici ..... gr. iv
Spiritus ..... ʒi
Aquæ ..... ʒiii
M. Make up antiseptically. m. xv=1/16 gr. of strychnin.
Sig. m. xv hypodermically two or three times a day.
—*Flint.*

The "cure" as carried out at Bellevue Hospital is as follows:

FIRST DAY'S INJECTION.

℞ Strychninæ nitratis ..... gr. 1/15
Atropinæ sulphatis ..... gr. 1/300
Aquæ dest. ..... m. x
M. Sig. Inject t. i. d.

SECOND DAY'S INJECTION.

℞ Strychninæ nitratis ..... gr. 1/20
Atropinæ sulphatis ..... gr. 1/200
Aquæ dest. ..... m. x
M. Sig. Inject t. i. d.

STOMACHIC MIXTURE.

℞ Tinct. cinchonæ comp. ..... m. xv
Tinct. capsici ..... m.ss i
Tinct. solani carolinesis ..... m. ii
Vini ferri amari, ad ..... ʒi
M. Sig. ʒi t. i. d. Shake.

SEDATIVE MIXTURE.

(First and second nights if needed.)

℞ Potassii bromidi ..... gr. xxxii
Chloralis ..... gr. xvi
Tinct. valerianæ ..... ʒi
Aquæ, ad ..... ʒiv
M. Sig. Teaspoonful repeated once if needed. Shake.

DIET.

One-half to one glass of milk (hot or peptonized), alternating with hot beef tea or broth, every two hours. Stomach washing as necessary.

On being discharged the patient is given:

℞ Tinct. calumbæ ..... ʒi
Tinct. capsici ..... m. xv
Tinct. nucis vomicæ ..... ʒi-iss
Apomorphiæ ..... gr. 1/3
Tinct. cinchonæ comp., ad ..... ʒiv
M. Sig. Teaspoonful in water after meals.—*C. L. Dana.*

℞ Auri et sodii chloridi ..... gr. 1/24
Strychninæ nitratis ..... gr. 1/60
Nitroglycerini ..... gr. 1/100
Atropinæ sulphatis ..... gr. 1/200
Digitalini ..... gr. 1/60
Sodii chloridi ..... gr. 1/8
M. et. ft. tab. No. 1. Sig. For hypodermic use.—*Dunham.*

To relieve the symptoms of gastritis and the craving for alcohol:

℞ Decoct. althæ ..... ʒv
Aquæ chlorini ..... ʒii
Sacchari albæ ..... ʒii
M. Sig Tablespoonful every two or three hours.—*Zedekauer.*

MANIA A POTU.

℞ Trional ..... gr. xx
Tinct. capsici ..... m. x
Aquæ, q. s.
M. Sig. For one dose.

This should be preceded by a calomel purge.—*Bellamy.*

To prevent the adynamia which may follow the sudden withdrawal of alcohol:

℞ Spt. ammonii aromat ..... ʒss
Tinct. digitalis ..... m. x
Strychninæ ..... gr. 1/30
M. Sig. For one dose. Repeat every three hours.—*Tyson.*

Dr. Charles J. Douglas, in the *N. Y. Med. Jour.*, recommends for the insomnia and delirium of acute alcoholism one-thirtieth of a grain of apomorphin injected hypodermically. This dose is ordinarily large enough, but a sufficient quantity should be given to produce slight nausea.

Not only is sleep produced and the delirium allayed, but he claims the craving for alcohol is frequently relieved.

As soon as the acute symptoms have subsided, tonic treatment should be instituted and maintained for several weeks. For this purpose Dr. Douglas considers strychnin nitrate the most efficient remedy.

The Treatment of Amenorrhea.

The following formula may be employed, particularly if there is debility and anemia:

℞ Hydrargyri bichloridi
Sodii arsenatis
Strychninæ sulphatis, āā ..... gr. i
Potassii carbonatis
Ferri sulphatis, āā ..... gr. xxx
M. Divide in pil No. lx.
Sig. One after each meal.

In other cases it is well to give in place of this pill one of the following:

℞ Ferri arsenatis ..... gr. ii
Extracti nucis vomicæ ..... gr. xv
Manganes. sulphatis ..... ʒi
M. Divide in pil No. lx.
Sig. One after each meal.

If there is reason to believe that the amenorrhea depends on constipation, the following may be prescribed:

℞ Ferri carbonatis
Ammoniaci
Aloes, āā ..... ʒi
Syrupi, q. s.
M. Divide in pil No. l.
Sig. Give one or two a day after meals.

If there is obesity, the physician must insist upon the use of purgatives in addition to the emmenagogues. A useful formula under these circumstances is as follows:

℞ Aloes ..... gr. xv
Rue
Savin
Saffron, āā ..... gr. v
M. Make into 10 cachets, and give one twice or thrice a day.
—Lustaud: Consultations sur les Maladies des Femmes.

The following prescriptions are recommended for amenorrhea:

℞ Tinct. ferri chloridi ..... ʒiii
Tinct. cantharides ..... ʒi
Tinct. guaiaci ammon ..... ʒxii
Tinct. aloes ..... ʒiv
Syrupi, q. s., ad ..... ʒvi
M. Sig. Tablespoonful three times a day.—Dewees: *N. Eng. Med. Monthly.*

℞ Ferri peptonized ..... gr. xxx
Manganes. lactate ..... gr. xxx
Scammony ..... gr. xxx
Strychninæ sulph. ..... gr. 1/7
M. Divide in pil No. xl.
Sig. Two to four each evening on retiring.—Lustaud: *Med. Record.*

Silver Nitrate Injections in Pulmonary Phthisis.

Dr. Thomas J. Mays refers again to this treatment in a recent article in the *Philadelphia Medical Journal.* He gives the injections over the course of the vagi in the neck, and advises that the injections be made on the side of the neck below which the infected lung is located, although his experience has demonstrated that the side of the neck in which the injection accomplishes its best work varies in different individuals, and even in the same individual at different periods, and can not always be readily determined in advance.

Dr. Mays uses from 4 to 7 minims of a 2.5 per cent. solution of silver nitrate, to 5 minims of a 5 per cent. solution, while Dr. Charles W. Bachman, of Reading, Pa., has obtained good effects from the injection of 10 minims of a 2.5 per cent. solution.

This method of treating pulmonary phthisis has certainly produced good results in the hands of those who have adopted it.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical News (N. Y.), January 20.

1.—*Operative Treatment of Myopia of High Degree by Removal of Crystalline Lens. Charles Stedman Bull.
2.—*Gonorrhea; Its Dangers to Society. Albert Neisser.
3.—*Visit to the Newest Psychopathic Hospital. Frederick Peterson.
4.—*Diuretics in Renal Dropsy; Their Indications and Uses. E. R. Axtell.

New York Medical Journal, January 20.

5.—*Detection of Calculi in Liver and Gall-Bladder. Carl Beck.
6.—*Chronic Abscess of Frontal, Ethmoidal, and Sphenoidal Sinuses, followed by Meningitis and Death. J. H. Bryan.
7.—*Second Report on Therapeutics of Heroin. Morris Manges.
8.—*Cholelithiasis. E. C. Davidson.
9.—*Suppurative Ethmoiditis and Its Treatment. Frank S. Milbury.
10.—*Diarrhea. Charles O. Moiz.
11.—*Influence of School Life on Vision. Peter A. Callan.
12.— Enucleation of the Eye. David Webster.

Boston Medical and Surgical Journal, January 18.

13.—*A Rhode Island Philosopher (Elisha Bartlett). William Osler.
14.— Value of X-Ray Examinations in the Less Frequent Diseases of the Chest, Illustrated by Their Use in Those Cases Where Aneurysm is Present or Suspected. Francis H. Williams.
15.—*Remarks on Gunshot Wounds of Reduced Caliber Rifles in Santiago Campaign. Louis A. LaGarde.
16.—*Otitis Media in All Grave Diseases of Infancy. E. H. Pomeroy.

Cincinnati Lancet-Clinic, January 20.

17.—*Vaginal Section. Chauncey D. Palmer.
18.—*My Experience with Ectopic Gestation. Thos. W. Wright.

Medical Record (N. Y.), January 20.

19.—*Comparative Statistics in Treatment of Appendicitis. Edwin Marion Cox.
20.—*Inversion of Uncut Appendix. J. F. Baldwin.
21.—*Consideration of Failure of Antitoxin in Operative Cases of Diphtheritic Croup. J. Edward Herman.
22.—*A Common Case and Its Practical Suggestions. Josephine M. Wetmore.
23.—*Gynecology and Gyecologists in Europe. Abram Brothers.

Philadelphia Medical Journal, January 20.

24.—*Case of Tuberculosis of Kidney Without Marked General Symptoms. J. M. DaCosta.
25.— Lantern Demonstration of Origin, Development and Degeneration of Blood-vessels of Ovary. John G. Clark.
26.—*Absorption of Iron from Gastrointestinal Tract, and Dietetics of Anemia. John C. Hemmeter.
27.—*Outline of Principles of Malpractice as Related to Medicine and Surgery. Wm. C. Woodward.
28.—*Athetosis and Kindred Affections. Frank Fischer.
29.— A Pneumatic Sigmoidoscope. William V. Laws.
30.— Creolin-Poisoning. E. W. Pressley.

Medical Review (St. Louis, Mo.), January 20.

31.—*Surgical and Pathologic Features of Tuberculosis of the Esophagus, with Reports of Two Autopsies. Willard Bartlett.

Northwestern Lancet (St. Paul, Minn.), January 1.

32.— Clinical Lecture, A. MacLaren.
33.— Rubber Gloves in Surgery. G. G. Eitel.
34.— Antitoxin. O. W. Archibald.
35.— Inflammation of Middle Ear and Sequelæ. Thos. McDavitt.
36.— Arteriosclerosis. W. F. Smith.

Medical Fortnightly (St. Louis, Mo.), January 1.

37.— The Hymen. Byron Robinson.
38.— Peculiar Case of Poisoning by Potassium Iodid. E. A. Crain.
39.— Nosophen; Its Use in Neglected Cases of Chancroidal Adenitis. T. A. Hopkins.

Maryland Medical Journal (Baltimore), January.

40.— Recent Advances in the Study of Tuberculosis. Wm. Royal Stokes.
41.—*Home Treatment of Consumption. William Osler.
42.—*Night Air of New England in Treatment of Consumption. C. S. Millet.

Medical Dial (Minneapolis, Minn.), January.

43.— Diagnosis of Diseases of Rectum and Anus. C. M. Ferro.
44.—*Advertising in the Medical Profession. Charles T. McClintock.
45.— Congenital Rectal Occlusion the Result of Maternal Impressions. C. E. Worthington.

Cleveland Medical Gazette, December, 1899.

46.— Some Thoughts on Pelvic Disease in Women, Resulting from Injuries during Parturition. Edward S. Stevers.
47.— Pus in the Pelvis. Herman E. Hayd.

Kansas City Medical Index-Lancet, January.

48.—*Inflammation. Jabez N. Jackson.
49.— Laryngeal Stenosis. Clay S. Merriman.
50.— Prevention of Consumption. G. L. Richards.
51.—*Use and Abuse of Hydrochloric Acid and Pepsin in Diseases of the Stomach. F. W. Froehling.
52.— Report of Case of Puerperal Infection, Complication and its Treatment. F. S. Clinton.
53.— Neurasthenia. John Punton.

International Journal of Surgery (N. Y.), January.

54.—*Flat Foot and Hallux Valgus. F. A. Goodwin.
55.— Regional Minor Surgery. George G. Van Schaick.
56.— Treatment of Fractures. W. L. Estes.
57.— Technique of Surgical Gynecology. Augustin H. Goelet.
58.— Introductory to Mechanical Diagnosis and Treatment of Urethral Diseases. Ferd C. Valentine.
59.—*Surgical Treatment of Diphtheritic and Membranous Croup. S. L. Kilmer.
60.— Two Cases of Fracture of Olecranon in Young Persons, Difficult of Diagnosis. Calvin F. Barber.
61.— Ovarian Cyst: Ovariotomy. Cancer of the Cervix: Vaginal Hysterectomy. Uterine Fibroid: Abdominal Hysterectomy. Matthew D. Mann.
62.— Compound Fracture of the Inferior Maxillary Bone. G. V. Bush.
63.— Extemporaneous Splinting: A New Method. E. A. Tracy.
64.— Subcutaneous Nailing or Wire Suturing of Ununited Fractures. W. L. Hughlett.

Pacific Medical Journal (San Francisco), January.

65.— Some Observations on Continence as a Factor in Health and Disease. P. C. Remondino.
66.— Large Fifty-Pound Ovarian Cyst with Ascites; Operation; Recovery. E. H. Smith.
67.— Principles of Diet in Gastric Diseases. A. W. Perry.

Medicine (Chicago), January.

68.—*Secondary or Membranous Cataract. Henry D. Noyes.
69.—*Serious Heart Disease Without Rheumatism: A Further Report. A. L. Benedict.
70.—*Nursing in Lying-in Period. Gustave Kolischer.
71.—*Spondylitis Deformans, Spondylarthritis or Osteoarthritis of the Spine. O. M. Steffenson.
72.—*Some Considerations in Sugar-Testing, with Description of a Method for Detection and Estimation of Sugar in Urine. Arthur R. Elliott.
73.—*Study of Aural Vertigo. Lewis S. Somers.

Seaboard Medical and Surgical Journal (Norfolk, Va.), January.

74.— Sexual Functions of Male and Female. J. Emmett Sebrell.
75.—*Perfect Antidote for the Poison of Snake and Spider Bites. S. T. A. Kent.
76.—*Local Anesthesia in Major Surgery. Kirkland Ruffin.
77.— Eulexin in Treatment of Diabetes Mellitus. Lucien Lofton.
78.— Progressive Procedures in Bone Surgery. James N. Ellis.

Carolina Medical Journal (Charlotte), January.

79.—Is Honesty the Best Policy in the Practice of Medicine? F. Julian Carroll.
80.—*Multiple Synchronous Amputations. R. L. Gibbon.
81.—*Diet in Lithemia. A. B. Conklin.
82.— Appendicitis; Necrosis of Tibia; Epilepsy. Wm. L. Rodman.
83.—*An Unusual Case. K. G. Averett.

Yale Medical Journal (New Haven, Conn.), January.

84.—*Case of Dynamic Ileus. Leonard W. Bacon.
85.— Two Cases of Resection of Stomach for Carcinoma. B. Farquhar Curtis.
86.—*Remarks on Recent Methods of Treatment for Aortic Aneurysm. William F. Verdi.
87.—*Some Observations on More Common Forms of Sexual Impotence. Ernest D. Chipman.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), December, 1899.

88.— Conservatism in Medicine and Surgery. Frederick W. Robbins.
89.—*When and How Shall We Operate for Uterine Fibroids. W. P. Manton.
90.—*Sympathetic Ophthalmia. M. R. Beaudoin-Bennett.
91.—*Tuberculosis of Peritoneum. Hal C. Wyman.
92.—*Contagiousness of Pulmonary Consumption. Ernest L. Shurly.
93.—*Survey of Modern Therapy. Frederick McD. Harkin.
94.— Case of Hip-Joint Amputation by Wyeth's Bloodless Method. R. B. Baird.

Atlanta Journal-Record of Medicine (Ga.), January.

95.—*Physiologic Therapeutics of Reasoning Madness. C. A. F. Lindorme.
96.—*Some Notes on the Philippines. Frank S. Bourns.
97.—*Diet in Lithemia. A. B. Conklin.
98.—*Painless Application of Arsenical Paste. William Perrin Nicholson.

Railway Surgeon (Chicago), January 9.

99.—*Conservatism in Surgery. Ben Thompson.
100.— Empyema. D. C. Brockman.
101.—*Eczema Complicating Wounds. J. Schneck.
102.— Four Cases Illustrating Various Serious Types of Fracture and Traumatic Amputation. Thomas H. Manley.

Journal of Medicine and Science (Portland, Me.), January.

103.—*General Remarks on Prolapsus of Rectum in Children. Charles Greene Cumston.
104.— Brief on the Two Most Important Surgical Diseases of Children. Herbert F. Twitchell.
105.— Relation of Physicians to the Drug Habit. Harry M. Nickerson.
106.— As Told to the Doctor. Arthur F. Sumner.

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107.— Vesicorectal Anastomosis. Jacob Frank.
108.— Urethroplasty in the Female. L. L. McArthur.
109.—*Vaccination. A. M. Handshaw.
110.— Three Cases of Perineal Resection of Rectum for Carcinoma. A. E. Halstead.
111.— Tubular Stricture of Rectum. J. R. Pennington.
112.— Report of Case of Dermoid Cyst of Ovary Complicating Labor. H. F. Lewis.
113.— Case of Laryngectomy, with Exhibition of Patient Jacob Frank.

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1. **High Myopia.**—From a review of the more important literature of the past few years, Bull concludes that the most careful and conservative authorities all advocate the operation of removal of the lens in high myopia in selected cases and under wise restrictions. Therefore, in all it is important to study the case and definitely determine the condition of the myopic eye, also to take into consideration the age and occupation of the patient and the demands made on his vision. The intraocular tension should also be carefully examined, as it is apt to be above normal, and a minus tension would arouse suspicion of serious disease of the fundus. The possible dangers from the operation are, in order of their importance and frequency, intraocular hemorrhage, detachment of the retina, secondary glaucomatous symptoms, and infection of the corneal wound of the iris. The third danger is not serious, as the tension is relieved by extraction of the swollen lens and the danger of infection is also reduced to a minimum by modern methods. A possible complication is anterior synechia at the point of entrance of the needle, but this should not occur if atropin is properly employed. Another possible complication is incarceration of the iris in the corneal wound or prolapse through the wound. The contraindications are: 1. Extensive degenerative changes in the retina and choroid. 2. Existing detachment of the retina. 3. Membranous opacities in the vitreous, indicating disease of the choroid and vessels. 4. Previous loss of one eye from any cause. 5. Loss of transparency of the cornea from previous inflammation. 6. Any form of contagious conjunctivitis, especially trachoma. 7. Advanced age of the patient. 8. A myopia of less than D 12. The indications are: 1. If the central vision of the myopic patient with the best possible correction by glasses, is not sufficient for the needs and social position of the patient, the operation is indicated, first on one eye and then on the other, if no contraindications exist. 2. If there are unmistakable evidences of a rapid increase in the amount of near-sightedness, true progressive myopia, and if the myopia is D 12 or more, the operation may be done under the previously mentioned restrictions. He believes there is no reasonable doubt that removal causes decided improvement of vision, and the wearing of moderate convex glasses after the operation is much less annoying than the wearing of strong concave ones before. He describes the technique in detail.

2. **Gonorrhea.**—Neisser concludes his paper on the dangers of gonorrhea to society, alluding to the arthritis, the morbidity which it produces, especially in women, the loss of time as shown by military statistics, the cost of hospital treatment, and especially the blindness which is a result of this disease, and the sterility. He thinks that by using all the means supplied us we can lessen, to a very large extent, the ravages of the disorder and make its most serious consequences milder. The first step is to let the public know and appreciate the danger.

3. **Psychopathic Hospital.**—The psychopathic hospital of Giessen is described by Peterson, and he dwells on the needs of such an addition to our teaching institutions, and as furnishing the acutely insane the advantages that sufferers from other diseases have in the way of early diagnosis and immediate and skilful treatment.

4. **Diuretics in Renal Dropsy.**—Axtell discusses the pathology of the action of diuretics in renal dropsy, calling attention to their dangers and uses. He enumerates the various stimulating diuretics and gives their effects.

5.—See abstract in THE JOURNAL of Nov. 18, 1899, p. 1293.

6. **Abscesses of Frontal Ethmoidal and Sphenoidal Sinuses.**—The case reported by Bryan presents some features of interest. One is the rapid appearance of the meningitis, which could not have occurred through the frontal sinus, but was caused by infection through either the ethmoidal veins or the lymph channels. The extensive destruction in the posterior ethmoidal cells and sphenoidal sinuses was notable, and he believes that had the sphenoidal disease been discovered in time, the patient's life might have been saved. It is next to impossible to diagnose abscesses in this region when the symptoms are obscure. The only positive evidence is the choking of the optic disc, when associated with a postnasal secretion and occipital headache.

7. **Heroin.**—In the conclusion of Manges' paper he discusses Medea's investigations and gives a tabulated statement of 341 cases in which this drug was used in various disorders, as learned by him through correspondence; he adds seventy-five cases in his own service at the Mt. Sinai Hospital. He does not attempt any special analysis, but briefly notes the results in the different affections. The percentage of failure of the drug in the wide range of disorders was 21, which he thinks is a very small showing. When the relief of cough is the only object, he finds a very high percentage of good results, 84 in his own cases and 89 in those reported by Stubbert. Bad effects only amount to 11 or 12 per cent. In acute bronchitis, heroin acts well, relieving cough and improving general conditions. In chronic bronchitis, the results are not so constant, though favorable as a rule. In bronchiectasis, the results are similar to those observed in chronic bronchitis. In pleurisy, the number of cases (5) was small. In acute pneumonia, the results were gratifying, the cough was usually controlled and comfort increased. In pulmonary phthisis, acute and chronic, heroin finds its largest field and is distinctly superior to codein in most cases and to morphin in many. It does more than simply allay cough, it stimulates respiration, relieves dyspnea, promotes sleep, frequently lessens and prevents night sweats, and at times even reduces temperature. In pulmonary emphysema and bronchial asthma, it is distinctly superior to any other drug thus far used. In influenza, it is valuable in allaying respiratory symptoms. Whooping-cough has been favorably influenced; the paroxysms were shortened in twenty-five out of thirty-three cases. In a case of distressing cough from abscess of the liver rupturing into the lung, it gave wonderful results in relieving the patient as long as life lasted. In cardiac and renal asthma he has had good effects, though it is inferior to morphin. In diabetes mellitus the results have not been satisfactory. In two cases the value of the drug in breaking up the morphin habit was shown by most gratifying results, and the author believes it worthy of a more extended trial for this purpose. For relieving pain, it is inferior to morphin. As regards after-effects, he has found disagreeable symptoms in only a very small percentage of cases, and with large doses, 1/6 gr., and they are decidedly less than after morphin and codein. The principal disorders have been constipation, nausea, vomiting, dizziness, etc., none of them serious, but his reports are not full or uniform in this regard, so he can not give exact statistics. He does not think the controversy as to the toxicity of heroin entitled to much notice, as the effects reported on dogs are so manifestly exaggerated and based on so few facts. It is well to remember, however, that heroin is a derivative of morphin and should be used with the discrimination and judgment required in the employment of all sedative drugs. Habituation has been noticed in 6 or 8 per cent., without the bad effects accompanying the morphin habit, none of the patients having suffered from it. On the other hand, a large number of reports refer to the fact that the same dose may be used for a long time without any habituation.

8. **Cholelithiasis.**—Davidson's paper is a general discussion of the subject and points out the medical and operative treatment. One case is reported.

9.—See abstract in THE JOURNAL of Nov. 11, 1899, p. 1230.

10. **Diarrhea.**—This article is a brief discussion of diarrhea in children. The author points out that in the majority of cases the following indications are to be met: 1. A thorough cleansing of the intestinal tract, which he has always obtained by either small doses of calomel frequently repeated, by castor-oil, or by enteroclysis, if the cause was determined to be in the lower bowel. 2. Rest, by abstaining from food for at least twenty-four hours, or allowing only the easily digestible and non-irritable substances, such as albumin-water, peptonized milk, etc. Opium is a harmful drug in a majority of these cases. 3. Correction of improper food, which in children is found to be the most frequent cause of diarrheal conditions.

11. **School Life and Vision.**—Callan thinks that the children in school have at present too much to do, and that there is an injury to their sight thus being produced. He has examined 500 colored children, selecting them because he knew that these influences had not acted on their parents, and therefore there would be no tendency to myopia, and he found in the more advanced, 3 per cent. of near-sightedness.

13. **Elisha Bartlett.**—Osler's article, which is not completed in this issue, is an interesting account of the career of Dr. Elisha Bartlett, a native of Rhode Island, and probably the most distinguished physician of the state, but one who has not thus far left any deep impression on its local history or institutions.

15. **Modern Military Wounds.**—LaGarde compares the results of experiments with the modern military rifles and the practical experience in the Spanish-American War. The results of experimental work in the Frankfort arsenal are taken up in detail, and the field observations stated in direct connection with them: 1. The experimental evidence showed that shock impressed on a member increases with the velocity, whether a bone is traversed or not, always greater with leaden projectiles. The diminution of shock has been one of the objections to this modern bullet. It has been stated that a wound would not suffice to throw a man *hors de combat*. Whether this is true of savages or horses in a cavalry charge or not, it was not true of soldiers in the Spanish-American War, who, on receiving a wound, with but few exceptions, went to the rear. 2. Explosive effects at very short range are about the same for the two projectiles, but continue for a longer distance with the smaller bullet. But one case approaching explosive effects was observed in Cuba, and this is probably due to the fact that when these occurred the cases were fatal and could not be studied by the surgeon on the battlefield. 3. The slight wounds of the soft parts caused by these modern bullets and their favorable course in healing was borne out by the Santiago campaign. 4. No cases of alarming hemorrhage were observed. 5. It was found that the Mauser bullets produced less comminution of the shafts of the long bones in both experiments and in the campaign. 6. Beyond the zone of explosive effects, the hard projectiles almost invariably perforate or gutter the joint ends of the bones, and the lesions of the articulations are never so grave. This tallies exactly with experience in Cuba. LaGarde does not recall a formal excision for the mechanical effects of the Mauser bullets, though there were many cases of gunshot injury. There were at least twenty cases of injury to the knee-joint alone, which were immobilized and sent North, and, so far as heard from, have done well. The results are in striking contrast with those of the large leaden bullets. 7. The projectiles of hard exterior lodge less frequently in the tissues than the old leaden bullets. The experience in Santiago showed a surprisingly large number of lodged bullets, much greater among the Americans than among the Spanish. LaGarde accounts for this by the fact that the Spanish bullet wounds in the Americans were mostly at long range. 8. The old leaden bullets more often leave fragments of lead in the wounds. This needs no contradiction. 9. The new projectiles are less liable to carry foreign substances into the wound, which is also proved by experience. 10. The frontage of the jacketed bullet being less and the fact that it does not lodge often contribute to increase the percentage of recoveries in gunshot wounds of the lungs, which was found especially true. As a rule the wounds of the lungs were apparently so trivial that it was difficult to restrain the men in a recumbent position. 11. Owing to the diminished frontage, the new bullets will cause less disfigurement in facial wounds. This was found especially true in three officers, two of whom were not particularly good looking before the accident, but were improved by it. On cosmetic grounds the new bullet has some recommendations. 12. The projectiles of hard exterior are more humane than the old. Resection and amputation will not be so often required hereafter. In point of economy, it has a great advantage. All this is in accordance with Cuban experience. There were but three primary amputations, and not one of them was done for injury by the small bullets, but all for shell wounds. From these results LaGarde believes that we should consider the work of the experimental investigation as agreeing with and foretelling the conditions found in war.

16. **Otitis Media in Infancy.**—Pomeroy reviews Ponfick's statistics of otitis media in children, and insists on the importance of examinations of children's ears in nearly all disorders. Five cases are reported. In regard to the technique of this examination, the utmost endeavor should be made to get the best possible light—artificial—with the head mirror and an assorted nest of specula, and the ear of the infant, being different from that of the adult in the shape of the external auditory canal, should be drawn downward and outward instead of backward and upward, and if the external canal be obstructed by dirt, cerumen, or anything else, it should be carefully washed and the effort at examination resumed. Nothing but long-continued practice will suffice to give one a definite idea of the appearance of the tympanic membrane either in health or in disease, but the practice should be persisted in, for there is nothing about it to prevent any practitioner with eyes becoming as expert in this examination as the most cultured aurist. The fact should be reiterated again and again, that in very many cases there is no abnormal appearance to the exterior of the tympanic membrane, and yet the middle ear may contain pus and be the source of a toxemia threatening the life of the patient. It is important also to remember that an incision made carefully in the lower posterior quadrant of the tympanic membrane is wholly free from danger, and will frequently reveal a case of grave disease and at the same time be the means of almost instant relief. Thorough cleansing of the ear and douching it with sublimate solution should be done before the puncturing, and ether or chloroform anesthesia induced for a thorough examination.

17.—See abstract in THE JOURNAL of January 20, p. 166.

18. **Ectopic Gestation.**—Wright reports three cases of extrauterine pregnancy operated on, the patients all making good recoveries. He says that it makes very little difference how thoroughly we may be "read up" on the subject, there is considerable doubt about taking active measures in these cases. The authorities leave out just enough of the important symptoms to make us doubt the diagnosis. Again, one of the very prominent symptoms is not mentioned, as far as he has observed, namely, the odor of decomposition that accompanies the vaginal discharge and suggests miscarriage with retained placenta. Still again, authorities speak of the clot of blood making itself prominent, as though it were present from the first, whereas it is 48 to 72 hours before any distinct mass can be defined.

19. **Comparative Statistics of Appendicitis.**—Cox criticises the medical statistics of appendicitis, especially noticing those of Sahli, and reports several cases illustrating the value of operation and the untrustworthiness of medical statistics. He thinks that the medical figures report only cases that recover from attacks, without regard to their recurrence, and at the expense of surgical statistics in that they exclude cases that have gone so far under medical treatment as to be hopeless with surgery. Medical treatment, he thinks, with our present knowledge of the disease, is useless, except as an adjunct, one attack of appendicitis making another almost certain. He also thinks that operation in the quiescent period is a safe measure, especially because we can leave the abdominal wall in good condition after it is done. This is a very important consideration.

20. **Inversion of Uncut Appendix.**—Noticing recent articles in reference to the inversion of the appendix as advised by Edebohls and Dawbarn, Baldwin adopted the suggestion and has practiced it now in considerably more than 100 cases. He finds that his technique is quite different from that of Edebohls, and describes his method at length: The appendix is freed from adhesions if present, and brought up into view in the usual way. The tip is held by the assistant with one hand, while with the thumb and forefinger of the other the colon is supported just below the origin of the appendix. With a ligature carrier, a catgut ligature is then introduced at the base of the appendix, so as to include the meso-appendix, care being taken to embrace the small artery that runs along close to the appendix. The meso-appendix is then ligated, the ends of the ligature being left long. With scissors, the meso-appendix is severed just beyond the ligature, and the tissues constituting it are then seized, either with fingers or forceps, and stripped off from the appendix from the base to the tip. This is usually accomplished with a single effort, but occasionally they will have to be removed in pieces. Not infrequently, and quite usually, when operating on an acutely inflamed appendix, great thickening of the peritoneal and muscular coats will be found present. These coats will be so infiltrated that inversion is impossible. In such a case a longitudinal incision can be easily made with either knife or scissors, cutting through these two coats down to the mucous membrane. This having been done, the thickened coats are very easily peeled off, leaving merely

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the mucous membrane intact, which is so thin and soft as to offer slight obstacle to inversion. Not infrequently, however, the distal extremity of this mucous membrane tube is obliterated as a result of previous inflammatory attacks. In such an event the obliterated end must be snipped off with scissors before proceeding to the next step. Care should be taken, however, not to open the lumen of the tube. The appendix having thus been prepared for inversion, the tip is seized between the thumb and forefinger of one hand and inverted by pressing on it with the blunt end of a patent-eyed needle. The maneuver is accomplished by a manipulation somewhat similar to that employed in putting an angle-worm on a hook. The tip having been thus inverted for about the length of the needle, an inch or more, the needle is removed and an ordinary long probe substituted. With this the inversion is completed in an instant. If, as the probe is being introduced into the colon, carrying with it the appendix, it meets with a fold offering obstruction, it should be withdrawn and the rest of the inversion completed with the fingers. This is accomplished without any trouble. Inversion now being complete, one end of the ligature previously used is threaded into the needle with a single stitch taken across the opening into the bowel, which marks the point of disappearance of the appendix. If it seems desirable, two stitches can be taken. The catgut is drawn through until the stump of the meso-appendix is brought up against the opening, and then by tying the two ends, the operation is completed. Only in a very few cases were conditions found which rendered inversion impossible or inadvisable. These were mostly cases of gangrene or of a tight constriction near the base. In only one has he had the chance of investigating the post-operative appearance of the appendix, which showed it much softened and rapidly breaking down, while healing seemed to be complete at the site of operation. He believes that it usually sloughs off promptly, or possibly undergoes a species of digestion.

21. **Failure of Antitoxin.**—Herman's article, like a previous one, noticed in THE JOURNAL, is an attack on serum treatment, especially diphtheria antitoxin. He tries to show also by statistics, that intubation is not more effective than tracheotomy, and that they are both more fatal in antitoxin-treated cases. He rails against dogmatism in medicine, but is decidedly positive in his own statements.

22. **Overworked Children.**—Wetmore considers children at school, whose physical development is not properly attended to. Her article is a plea for proper direction of the education of the young at the critical age, as a better preparation for the later vicissitudes of life.

23. **Gynecology and Gynecologists in Europe.**—Brothers' article is an account of his observations with French, German and English gynecologists and his professional experiences abroad.

24. **Tuberculosis of the Kidney.**—The case which forms the subject of DaCosta's clinical lecture is one in which the symptom of pain alone existed. It shows how a serious disorder may exist and hardly reveal itself. It also shows the importance of careful systematic examination of the urine. He does not think that the prognosis is a favorable one.

26. **Absorption of Iron.**—Hemmeter shows that iron is absorbed in various preparations, and that it is not necessary to use organic compounds. In his opinion, the object to be accomplished is not to get as much iron as possible into the system, but just the right quantity, and for this purpose the Blaud's pill and chlorid of iron are as effective as any other preparations.

27.—See abstract in THE JOURNAL of Nov. 18, 1899, p. 1295.

28. **Athetosis.**—Fischer reports a case of athetosis occurring in a boy of 12, after rheumatism, and its successful treatment by arsenic. This suggests to him the relation of this condition to chorea, and he discusses its pathology. He concludes that it is a reflex cortical disorder primarily due to sensory disturbances.

31. **Tuberculosis of the Esophagus.**—The case reported by Bartlett is one of chronic lymphatic tuberculosis, with miliary tuberculosis of the liver, tuberculosis of the spleen, tuberculous pneumonia and peritonitis, and secondary ulceration into the esophagus, the result of a tuberculous destructive process in the peribronchial lymphatic node. He thinks that the esophagoscope should be employed in every case of pronounced, general lymphatic tuberculosis. As all portions of the esophagus are shown, by the reports that we have, to be amenable to surgical treatment, he suggests that tuberculous disease might also be treated this way.

41.—See abstract in THE JOURNAL of Nov. 25, 1899, p. 1360.

42.—Ibid.

44.—See THE JOURNAL of January 27, ¶ 35, p. 223.

48. **Inflammation.**—First noticing the non-infectious inflammations, Jackson proceeds to describe those due to infection, and gives the indications for each form. Incision, free drainage, curettement and excision, antiseptic irrigations or packing are the surgical resources in staphylococcic inflammations. In streptococcic inflammations, free multiple incisions and natural drainage offer the most advantage, but the use of hot water, causing what he calls forced drainage, is also essential, as bringing the germs to us which we were heretofore unable to reach.

51. **Hydrochloric Acid in Stomach Disease.**—Froehling first notes the unsystematic and reckless prescription of acids and pepsin, etc., that has been practiced, and gives his theory of the rationale of the action of hydrochloric acid, which he considers as a stimulant to the secretion and motor functions of the stomach, while also having some direct effect on the digestion. We do not supply the full amount required for digestion, but the small amount which we do give acts in the above ways. He begins, as a general rule, with a dose of 15 drops, and finds out by means of the stomach-tube how this dose acts, repeating the examination several times if necessary. As all these patients require stomach washings, these examinations are easy. As a rule he finds it necessary to give from 10 to 20 drops at an hour's interval after each meal, until 30 to 60 drops are taken in cases of deficient normal acidity. Pepsin, he thinks, is not a useful drug.

54. **Flat Foot and Hallux Valgus.**—Goodwin pleads for more careful examination of patients, especially in orthopedic surgery, and discusses the mechanism of and technique of the operations for flat foot. He thinks that the use of a proper shoe will be an important element in the prevention of the condition, and as regards well-developed cases, Whitman's method comes into play. If we can restore the normal condition by replacing the dislocated bones without a cutting operation, it is good, but it requires anesthesia. The technique is described, as are also the orthopedic appliances required.

59. **Surgical Treatment of Diphtheria.**—First speaking of the disadvantages of intubation from possible plugging of the tube, Kilmer mentions the advantages of tracheotomy in operating through healthy tissues, and the easy means of clearing the tube. He mentions a method which he has employed in emergencies. He has a trocar made to fit the ordinary tracheotomy canula after removing the tube, and with this he punctures through the skin and underlying tissue, the puncture being distended and kept from bleeding by the pressure of the canula. After penetrating the trachea between the rings, the trocar is removed, the canula pushed in its position, the inner tube inserted and the operation completed in the usual way. With this method, he has been able to perform tracheotomy in less time than it takes to describe it, without the loss of a drop of blood.

68. **Secondary Cataract.**—The subject of secondary or membranous cataract and its treatment are discussed by Noyes, who describes the condition, the indications for operation and the technique. He illustrates a new knife-needle which he employs, and is prepared to say that the operation through the sclera with this instrument is practically devoid of serious risks and can be commended for general adoption. He took it up with some timidity, until experience convinced him of its value. He concludes by saying that one may sometimes refrain from secondary operation when the patient's circumstances are such that the highest vision is not required, or he is satisfied with what vision remains, or is too timid to willingly undergo operation.

69. **Heart Disease Without Rheumatism.**—Benedict reports several cases of endocardial disease of unknown origin, and remarks on its possibility. He thinks that almost any germ or inflammatory irritant which may cause inflammation of the joint under certain circumstances, may invade the endocardium and produce valvular defects.

70. **Nursing in Lying-in Period.**—Kolischer calls attention to certain points in the nursing of the puerperium. If ergot does not act well when given by the mouth, he says it should be administered by the rectum in aqueous solution with a small quantity of glycerin. Micturition is usually watched too anxiously by the attending physician, and the catheter should not be used too early. Warm poultices and gentle pressure to stimulate the organ should be first used. Frequently an erroneous diagnosis of cystitis is made, where there is simply desquamative catarrh, which is usually recovered from without local treatment, and this is only necessary when the trouble is severe and pain excessive. The pelvic articulations rarely receive sufficient attention. If there is pain in the symphysis or in the sacroiliac articulations, or permanently in the thighs, some distortion of the articulations should be looked for, and a firm bandage applied to the pelvis, which gives comfort, immobilizes the joint, and prevents the accumulation of exudates and fibrinous deposits. Fissures of the areola of the nipples may be troublesome, and local applications be ineffective. The simplest and best method is actual cauterization, which is best done with galvanism, but when this is not possible a 4 per cent. chromic acid solution may be applied with a small brush. By this means a dry eschar is produced. In the diet of the puerperium, the intestinal tract should not be overloaded. Eggs are often used, but with habitual constipation and flatulence these often cause fermentation. In some cases bowel movements are hard to produce, and the faradic current should be used to stimulate the organ. A roller electrode is most convenient; the current should be moderate. In differentiating between atonic and hysteric bowel complications, the abdomen should be examined for hard nodules, which disappear and reappear. These indicate the neurotic nature of the trouble.

71. **Spondylitis Deformans.**—This paper is a brief account of this condition, with the report of a case. The author considers it incurable, and believes that remedies that build up the system should be used.

72. **Sugar in the Urine.**—Elliott redescribes a test for the detection of sugar in the urine, first published by him in the *New York Medical Journal* in 1894. He considers it to have special advantages in its stability, sensitiveness and accuracy.

73. **Aural Vertigo.**—This paper is a general treatment of the subject of aural vertigo, which the author believes to be connected with functional or organic changes in the semicircular canal, though it may have various causes.

75.—This paper has appeared elsewhere, and was abstracted in THE JOURNAL of January 13, ¶ 58, p. 99.

76. **Local Anesthesia.**—Ruffin recommends the use of distension of the tissues with sterile normal salt solution to obtund the sensibility, completing the anesthesia with cocain to the skin. He has operated by this method in a number of cases, one of resection of a rib, one of incarcerated femoral hernia, one of amputation of the arm where general anæsthesia was contraindicated, and one of abdominal section. He thinks it is a method worthy of more extended use in many cases where general anesthesia is unadvisable.

80. **Multiple Synchronous Amputations.**—Gibbons refers to a case previously published, in which he performed and superintended synchronous amputations of both arms and legs, two operators working at once. The patient died seven days after the operation. He discusses the advisability and advantages of multiple amputations performed synchronously or in succession, and thinks synchronous operations justifiable when hemorrhage can not be controlled by ordinary means. It is, however, best not to be in too much of a hurry to resort to them. He finds, in Ashhurst's surgery, ten cases of multiple amputation, two of which were synchronous, and adds one more from the literature, all successful. He regrets that he could not have added his case and made an even dozen.

81. This paper has previously appeared elsewhere as an original; see THE JOURNAL of January 27, title, 104, p. 221; also title 97, below.

83. **Maggots in Vagina.**—The case reported is one of maggots filling the vagina, in a woman aged 65, occurring after a diarrhea in which she was helpless and neglected. She was relieved by warm carbolic acid solution.

84. **Dynamic Ileus.**—After noticing the literature of the subject, Bacon describes a case of ileus, occurring in a saloonkeeper; one-third of the small intestines was in a state of contraction, including eighteen inches in extreme contraction to the size of a lead pencil. The relief was by celiotomy and manipulation of the intestines. A second attack occurred from injudicious indulgence in sauerkraut, and was relieved by bromid of potash and chloral.

86. **Aortic Aneurysm.**—The methods especially mentioned are the use of wire and gelatin. A case is reported of the latter, in which some slight apparent relief was obtained, and autopsy showed adherent organized coagula covering the walls of the sacculated aneurysm.

87. **Sexual Impotence.**—The chief subject mentioned by Chipman is psychic impotence, relieved by the use of Winternitz' psychrophor, which is described. From his limited experience, the author holds that in the majority of cases the condition is one of hyperemia and hyperesthesia of the prostatic urethra and that in a large percentage the prognosis is unqualifiedly good.

89. **Operation in Uterine Fibroids.**—Manton would operate in all cases of symptom-producing fibroids. Other treatment, he thinks, is temporizing and futile, unless conditions, positive contraindicating are present. When myomectomy is impracticable, total ablation is the operation demanded. The questions of technic are discussed, and the author protests against indifference and delay in this matter.

90. **Sympathetic Ophthalmia.**—Four cases of this disorder are reported, and the author enumerates the conditions under which he would perform enucleation.

91. **Tuberculosis of Peritoneum.**—The special point in this paper is the importance of hygiene, pure air and sunlight as adjuvants to the surgical treatment of peritoneal tuberculosis.

92.—See abstract in THE JOURNAL of Dec. 23, 1899, p. 1617.

93.—**Modern Therapeutics.**—The variations of practice of physicians in the treatment of diseases are noted, and the author sums up the therapeutic measures in which he thinks we can all unqualifiedly agree, as: 1. Hygienic measures of all kinds. 2. The so-called specifics: quinin in malaria, iodids and mercury in syphilis, thyroids in cretinism and myxedema, and antitoxin in diphtheria. To these he would add apomorphin in emotional and paroxysmal hysteria. 3. In a general way we agree on the value of sodium salicylate in rheumatism, iron in anemia, arsenic in some skin diseases or chorea, digitalis and strychnin in certain heart weakness, bromids in epilepsy, viburnum as a uterine sedative, and a few others.

95. **Therapeutics of Reasoning Madness.**—The idea of this paper is that the nervous system is restricted to the "scoring of the data of sense action" and that the red corpuscles of blood have a special psychologic function. The reader can estimate this for himself.

96. **Notes on the Philippines.**—According to the author of this article, the Philippines are fairly healthy for the tropics, and free from some of the most dreaded diseases. Intestinal troubles can be avoided by moderate care in hygiene. Malaria is general but more serious in certain regions. Smallpox has been epidemic, and leprosy is found in many of the islands and requires the attention of the authorities. Beriberi is at present epidemic. Tuberculosis, rheumatism and typhoid occur in about the same proportion as here. Venereal diseases are common; an especially virulent form of chancroid is more frequently met with than syphilis. Skin diseases are common, particularly the so-called dhobie itch, which attacked probably half the army, but is easily controlled, if taken early, by formalin. He thinks that when the condition of the country becomes more settled, Americans can live in comfort and enjoy good health, and some of the temperate highlands will prove valuable sanitariums.

97.—See ¶ 84, above.

98. **Painless Application of Arsenical Paste.**—Nicholson reports a case of removal of probably malignant tumor and the application of orthoform before applying the arsenical paste to the cut surface. The application was painless and recovery apparently perfect.

99. **Conservatism in Surgery.**—Thompson's article is rather extreme in its plea for conservatism in surgery.

101. **Eczema Complicating Wounds.**—Schneck sees, in the predisposition possessed by some individuals to eczema, a rever-

sion to the skin-casting tendency of some of the lower organisms from which we are presumably derived in the course of evolution. He asks: May we not expect that the manifestations of the skin known as eczema may be the result of normal physiologic processes?

103. **Prolapsus of Rectum in Children.**—Three cases are reported and the pathology and treatment discussed. Cumston would operate in acute types of prolapsus recti which are irreducible, with gangrene or obstruction, in all cases of chronic irreducible prolapse, to avoid future trouble and impairment of the health, and in reducible cases which can not be relieved by milder therapeutic measures.

109.—See abstract in THE JOURNAL of Nov. 11, 1899, p. 1230.

FOREIGN.

British Medical Journal, January 13.

Concussion of Retina. SYDNEY STEPHENSON.—The case reported is one of the condition described by Berlin, in which there is a cloudiness of a portion of the retina not involving the blood-vessels, reaching its height in twenty-four to thirty-six hours, and disappearing in two or three days. It is accompanied with some affection of sight, episcleral congestion, and a difficulty in getting the pupil to dilate from atropin. Berlin's theory was that rupture of the choroid was followed by bleeding and edema of the retina, but Denig has lately maintained that it is due to impingement of the vitreous on the retina, tearing the internal limiting membrane and following the vitreous into the nerve-fiber layer. The alternate elevations and depressions thus brought about in this layer are, in his view, the cause of the ophthalmoscopic appearances. Stephenson's patient was a boy who had been struck with a ball, and there was reduced tension, and at first contraction and later widening pupil.

Carcinoma of Ascending Colon and Its Treatment. W. MCADAM ECCLES.—Two cases are reported of carcinoma of the ascending colon. In one, death followed six hours after the operation; in the other, the operation was a double one and recovery followed. The author thinks that operation before the signs and symptoms of acute obstruction is comparatively safe. His method of dealing with the mass extraperitoneally is also of interest. In these cases, after exploratory incision and determination of the site of the growth, there should be a free opening, as it is better to risk a ventral hernia than to have an unremoved cancer. If the growth is movable and the intestine not too fixed, he believes that it is best to bring the intestine and tumor out on the surface of the abdominal wall and perform the excision at a later stage. If acute obstruction exists, this is certainly advisable and a temporary artificial anus should be made on the proximal side. When the growth has become so fixed that it can not be brought outside, it may be best to make an anastomosis between the ileum and the transverse colon near the hepatic flexure, and leave the excision till a later operation, when the passage of the intestinal contents has been fully re-established. Such cases, however, are not likely to be successful, as the adhesions imply advanced growth and infection of the lymphatic glands.

Lancet, January 13.

Malaria and Mosquitoes. G. BASTINELLI and A. BIGNAMI.—The authors discuss the facts as to the natural history of the malarial parasite and its habitation in man, and conclude that all three species adopt the same species of mosquito as their host, and preserve their distinguishing characters. A single infected mosquito is capable of inoculating malaria into several persons, and of producing a mixed infection. They have endeavored to study the relation between the time of infection and the local appearance of mosquitoes. They find that in winter only relapses of the different forms of malaria are observed, and as the season advances estivo-autumnal fever becomes more and more rare, until in the spring it is very difficult to find a patient with crescents. On the other hand, relapses of tertian and quartan continue through the spring until the beginning of the new season's malaria. It is possible that a primary infection of common tertian may occur in the spring, but the malarial season proper does not commence until the beginning of July and does not terminate until the end of autumn. By studying the laborers working in the malarial region near Rome, the authors find that they become infected with the estivo-autumnal fever at the end of July or the beginning of August, while the infected mosquitoes only begin to appear late in June. It seems, therefore, that the malaria endemic was due to infected mosquitoes that have become so from the relapsing patients, though it is difficult to see just how they obtain crescent parasites from relapses, apparently of the tertian fever. It is possible, however, that in some cases, crescents escaped notice. There are still, therefore, some questions to be solved. The practical conclusion, however, which they deduce, is that the treatment of the malarial patient ought to be carried on energetically early in the season, to prevent infection of and dissemination by mosquitoes.

Volkmann's Ischemic Paralysis; Treatment by Tendon-Lengthening. HERBERT W. PAGE.—The subject of Page's article is the ischemic paralysis described by Volkmann, and due to pressure on the muscular field rather than to nerve lesions. In his case he practiced lengthening of the tendon, and found that it produced decided benefit. He thinks it is the first case on record where this method has been employed for this special form of paralysis.

Hypothermia. E. B. HULBERT.—The author reports a case of a patient who died with symptoms of somnolence and coma, but without any gross lesions discoverable on post-mortem. The peculiar fact, however, was his temperature, which was observable for eighty-eight days, and in only eighteen did it register above 98.4 F. On the other hand, on several occasions it went down to below 90. At one time the minimum in one-half hour's exposure in the rectum was only 81.6, while the surface temperature of the chest wall was 75.5 F. He reviews the literature of the subject.

Diet in Typhoid Fever. R. W. MARSDEN.—The author gives the results obtained in 200 unselected cases of typhoid fever, with variations of the diet from that usually recommended and employed. He did not give a full diet. All patients receive milk only at first, and in mild cases without contraindications, on successive days, bread and milk with custard, fish with mashed potatoes, chicken, bread and butter and finally minced meat, remaining at this stage until convalescence was fully established, while in a severe case peptonized milk, with or without meat juice, etc., might have to be continued well into the period of convalescence. Slight rises of temperature or occasional irregularities of the bowels have not *per se* caused withdrawal of food. The patient's wishes, in the author's opinion, constitute a most important help, and he would add that his actions are an almost infallible guide. In no case was solid food forced on the patient. Taking up the different symptoms, he finds that diarrhea was absent throughout, in 61 cases. In 29, though it was present when fish was given, there was no interference with steady improvement, and in 107 in whom it was present at some time in the attack, though not when fish was given, there was not the slightest evidence of recrudescence. Considering the variability of the symptoms, he does not think we have evidence that careful dieting with solids acts in any way as an irritant to the intestinal mucous membrane. The percentage of hemorrhages—3 per cent. was rather low, and in no case was it fatal. There were no cases of perforation. In 180 of the 200 cases there was no evidence of any alteration in temperature from the food. Relapse occurred in 48; in 9 it was "spurious;" in 27 it was "true." This percentage—13.5—is by no means excessive, and he does not see the connection of relapses with the food established by these observations. He thinks that from a review of these 200 cases it must be concluded that a careful system of dieting, such as he has mentioned, has no injurious consequences, and when one considers the benefits obtained—viz.: more rapid recovery, diminished risk of surreptitious feeding with possibly harmful substances, lessened tendency to bolt food when allowed without proper mastication, and, finally, lessened tendency to asthenic complications, as post-typhoid anemia, gangrene, etc.—one must admit that there is no justification for resisting a craving appetite in the manner at present in vogue.

Annales de Dermatologie (Paris), November, 1899.

Centrifugal, Figured, Atrophying Hyperkeratosis. E. RESPIGHI.—Under this title Respighi describes an observation of what Mibelli calls porokeratosis, and asserts that the latter name is incorrect, as the lesion does not necessarily commence

at a pore of any kind, and does not necessarily have a groove. "The essential lesion is an imperfectly cornified, small, ring-shaped band which develops centrifugally, with an interpapillary canal slowly developing by centrifugal progression. The central area within the ring becomes more or less atrophied, with various depressions corked with the horny substance."

Bulletin de la Societe des Hopitaux (Paris), Dec. 28, 1899.

Radioscopic Differential Diagnosis of Broncho and Croupous Pneumonia. G. VARIOT.—The distinct unilateral shadow of croupous pneumonia is unmistakable, but radioscopy of bronchopneumonia is equally effective in the differentiation, although the indications it furnishes are much more delicate. They consist in a slight decrease in the transparency of the lungs, with the decrease most marked on the side in which the lesions are most advanced and most confluent. The edges of the shadow of the heart are also indistinct.

Journal de Medecine de Paris, January 14.

Mechanical Treatment of Sciatica. P. FRETIN.—"There is no other method of treatment which gives, so constantly, such favorable results as this when the patient has a certain amount of resignation and the physician a certain amount of skill and practice in mechanotherapy, patience, and confidence in the final success. The treatment is applied every day or every second day after improvement appears, for ten days to several months. The technic includes frictions, massage and vibrations of the nerve trunk; massage and kneading of the entire muscular apparatus of the member; passive extension of the sciatic nerve, and gymnastic movements of the lower extremities and of the trunk. The vibrations can be made with an apparatus. The entire member is first lightly frictioned with the vaselined hand, which soothes the pain, and then more energetic measures are applied, although it may be well to limit the first treatments to massage. Afterward each of the muscles that are painful to move is exercised in turn, with flexion, abduction, rotation, all with much patience, moderation and tact."

Presse Medicale (Paris), January 6.

Therapeutic Problem of Regeneration of Organs. P. CARNOT.—"Between the complete restitution of a resected segment of an organ, and cellular proliferation restoring functional balance, there are innumerable intermediate stages of what we call the regeneration of an organ. The lower the animal, the more complete the actual restitution. A resected claw may grow out again in a crab, while a resected kidney in man is only functionally compensated by the remaining kidney. The therapeutic problem of regeneration of organs is first to determine the more or less specific causes of cell multiplication. This problem, in spite of its importance, has never been formulated nor systematically studied before. But numerous observations of cell multiplication are on record and, with the writer's experimental research, have established that these causes may be either mechanical, toxic, infectious or physiologic." He mentions, among other instances of proliferation due to a mechanical cause, corns and an observation of Albarran's of an intense epithelial proliferation around some eggs of the Bilharzia in the bladder. The influence of toxic chemical agents on cellular proliferation is twofold: they stimulate, and then, in stronger doses arrest it. The substances which have the widest range in this respect, which stimulate with the smallest and require the largest dose to arrest cellular activity, are naturally best adapted to therapeutic application. Among these the compounds of iodin occupy the most prominent place of all substances tested. A fragment of liver grafted into the peritoneum of a dog, with a weak solution of cantharidin in acetone instilled at the spot, persisted in a most remarkable manner while the control grafts were all rapidly absorbed. The influence of infectious agents and their toxins on cell multiplication has long been noted: the rapid growth frequently observed after convalescence from typhoid and other fevers and the experimental epithelial proliferation after injection of weak doses of toxins into the circulation, besides hyperleucocytosis and cellular hyperproduction in the marrow and ganglia. Proliferation in this case has a more specific character. This or that toxin or microbe has a stimulating influence on certain cells and not on others; smallpox, vaccin and verrucous infections affect the cells of the epidermis; other toxins excite and then paralyze the nervous system, others the lungs, others the intestines. It might therefore be possible to stimulate the general proliferating power of the cells or, more specifically, the cells of the nervous system or of the alimentary canal, liver, pancreas, etc. The writer adds that he has in fact realized most interesting results in this line, particularly with typhoid infection and therapeutic sera, but further experiences are necessary before he can announce them. The fourth group of causes that determine the multiplication of cells is the *physiologic*. We know that after fecundation and during the entire life of the embryo the cells are stimulated to extraordinary proliferation. Experiments to determine the cause of this abnormally frequent proliferation were made with spermatozoa injected at different points, and also with the bodies of embryos in rapid development, to learn if there might not be some chemical substance in them which stimulates cell proliferation. The results are difficult to interpret, and further study is required, but the fact of a stimulation of cell proliferation is undeniable, and the impression was produced that this stimulation was specific and affected similar elements. In experiments with the yolk of egg introduced into the liver, the neo-vessels developed by the end of the second day, but the cicatrization, although rapid, was almost exclusively connective tissue. Danilewski recently called attention to the stimulating effect, on the general growth, of lecithin, which is so abundant in the body of the embryo. "This line of study should be followed further, as it promises to yield practical results." The more or less specific substance contained in the embryo is also found in the adult, as is evidenced by the success of organ therapeutics. Extract of the liver, for instance, is a physiologic stimulant to the liver cells, and it need not surprise us if it should also stimulate their proliferation. In a personal observation related, a woman with syphilitic cirrhosis of the liver and serious hepatic insufficiency was completely cured of the latter with liver extract, while apparently a new lobe developed. Others have seen the suprarenals increase in size under treatment with suprarenal extract, and the thyroid with thyroid treatment. It seems, therefore, to be established that the extract of an organ contains some substance or substances which stimulate the proliferation of the organ, and thus in organ therapeutics we already have a means of "therapeutic regeneration." Metschnikoff's latest research is based on this same principle of a "physiologic stimulant;" the utilization of the stimulating phase of histolytic sera. (THE JOURNAL of January 20, p. 189.) But it is a question whether there is a sufficiently wide margin between the dose that stimulates and the dose that destroys, to admit of their therapeutic application; also, whether this proliferating stimulation is much superior to that of the other stimulants mentioned above. An interesting point brought out in the course of the writer's research was that, as the function makes the organ, the functional secretions of a gland may stimulate its cellular proliferation. One kidney and a half of the other were resected in a dog; the remaining half proliferated rapidly until it attained normal size and function was re-established, when proliferation ceased. "There seems to be a very remarkable automatic regularization between the number of anatomic elements of an organ and the intensity of its functional activity in such cases. This law might be developed and utilized in therapeutics." The influence of nutrition on the proliferative activity is evident, but it is not alone sufficient to induce it. Local hypernutrition alone will never stimulate a cell to proliferate. The writer is now experimenting to see whether it is possible to determine and control the substance or product in neoplasms which stimulates them to such rapid growth. He concludes, from his research in general, that proliferation of the cells seems to be a reaction common to a large number of stimulating agents. Most of the reactions are too transient for therapeutic application, but there are some, more durable and more specific, which affect a certain kind of cells, and these we should study to bring under our control. This will be the more easily accomplished according as the regenerating and degenerative phases are more widely separated.

Archiv f. Exp. Pathologie (Leipsic), xliii, 3 and 4.

Effects of Antipyretic Drugs. L. KREHL.—The research of the writer and his pupils, who follow with two other articles on the subject, establishes that the action of the antipyretic substances in all probability extremely complicated, excita-

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tion and paralysis blending in the strangest fashion in the most diverse cells. Quinin and the antipyrin group induce phenomena of paralysis in animals whose heat regulating apparatus is altered in consequence of some disease, and this paralysis leads to a diminution of the spontaneous heat. These facts should be applied to man, with due reserve, but the paralyzing properties of the antipyretics should be borne in mind at the bedside and induce caution in administering them.

Effects of Suprarenal Extract on Heart and Vessels. R. GOTTLIEB.—Experiments with the isolated heart of cats and other mammals showed that suprarenal extract had a direct stimulating effect on the frequency of the pulse and raised the blood-pressure, while the heart-beat was much strengthened. The extract, therefore, not only affects the vessel-walls but also the motor apparatus of the heart itself.

Centralblatt f. Chirurgie (Leipsic), January 6 and 13.

Amputation of Penis. H. LUCAS.—The stricture at the orifice of the urethra, which occurs so often after amputation of the penis, can be entirely prevented by saving and isolating 3 to 4 cm. of the urethra, drawing it out and turning it down all around over the stump of the rest of the penis, which subsides out of sight after the edges of the tunica and the corpora cavernosa have been sutured together all round. The turned-over urethra forms a circular roll projecting .5 cm. above the skin, to which it is sutured all around and to which it soon grows. In an observation related at length the subject urinates in a large stream and never soils his clothing. The operation dates from over a year, and there is no trace of a stricture. Another observation is added for comparison, showing the discomforts of the stricture, eczema and erysipelas that have followed the old methods of amputation. In case of carcinoma the glandular metastases are sought and removed at a second operation.

New Method of Treatment and Drainage in Generalized Peritonitis. F. BODE.—This preliminary communication describes the particularly favorable results obtained at the city hospital at Frankfurt a. M., by taking out the entire contents of the peritoneal cavity after a median incision, pelvis elevated, without regard to slight fibrinous adhesions, but under constant sprinkling of warm physiologic salt solution, poured from a china pitcher holding one or two liters. The intestines are wrapped in compresses moistened with the salt solution, and the warm solution is poured over them from time to time to prevent their chilling. Strange to say, instead of this procedure inducing collapse, on the contrary, the weak, rapid pulse becomes fuller, probably from diminished intraperitoneal pressure and removal of toxic substances. The perforation causing the trouble is easily found and sutured. The empty peritoneal cavity is thoroughly washed out with thirty to forty liters of the salt solution, with especial attention to the liver and spleen regions and the small pelvis. The fluid accumulating in the depressions is very gently mopped up with compresses, and when the cavity and the serosa of the intestinal loops have thus been cleansed of their suppurating secretions, the loops are replaced under continuous sprinkling with the salt solution. This is easily accomplished: the red and meteoric loops frequently contract with peristaltic movements under the influence of the salt solution. A loop about the center is then lifted; the mesentery stretched taut, and a slit made in it at a point free from vessels near the radix mesenterii. A long drainage-tube is passed through the slit, forming an arch as the loop is replaced, the ends of equal lengths passing through the peritoneal cavity and emerging through two new incisions to the left and right, just above the colon. The tube has a number of openings along the center. Besides this main tube, another is inserted in each side incision; a fourth in the lowest point of the median incision and a fifth in the liver, stomach or spleen region. The abdomen is then closed; the air left in the peritoneal cavity is expelled by pouring in more salt solution as the suture is progressing, leaving a considerable quantity of salt solution in the abdomen. The permeability of the main drainage-tube is also assured by sending a little salt solution through it, under slight pressure. The patient is put to bed with the head and shoulders raised, to send the fluid down near the drain-tubes, and the abdomen is rinsed out two or three times a day with 1000 to 1500 c.c. of the saline. "By this combination of rinsing and drainage it was possible to evacuate quite considerable quantities of pus from the abdominal cavity in seventy-two hours, without material discomfort to the patient. We frequently observed that the rinsing was followed immediately by increased peristaltic movements and passage of flatus, much to the relief of the patient, and amounting in some cases to slight diarrhea under the influence of the salt. There is nothing to prevent permanent irrigation through the main tube. Serious symptoms usually disappear by the third or fourth day, when the rinsing tube is removed and the drain-tube replaced, at first with smaller drains and then with loose tampons, and the openings finally closed. Generally speaking, the course of peritonitis treated according to this method was remarkably smooth and mild, convalescence extremely short, and the patient usually completely recovered by the end of three weeks. Similar irrigations, practiced on the cadaver with colored solutions, showed that the fluid penetrated to the remotest portions of the abdominal cavity, even under very adverse circumstances."

Deutsche Medicinische Wochenschrift (Leipsic), January 11.

Testing Tetanus Antitoxin: Its Application in Practice. E. BEHRING.—Reliable statistics to determine the efficacy of this antitoxin can only be obtained when the treatment is commenced not later than thirty hours after the recognition of the first symptoms of tetanus, and with a dose of not less than 100 A. E. (antitoxin-einheiten or units). Behring thinks that if the mortality is reduced to even 15 per cent., we should hail the antitoxin treatment as a great progress. In order to accomplish this it should be on hand in every hospital and every drug store, and it is now put up in 100-unit vials. "The main point is its early use, not increasing the dose." Behring has succeeded in producing an imperishable tetanus toxin by adding malachite green, natrium phosphate and toluol—and offers it to scientists at a low price in exactly the amount that is neutralized by 1/1000 antitoxin units, and, mixed and injected into a mouse, leaves the animal healthy. He hopes that this or something of the kind will be accepted for international control of the tetanus antitoxin, similar to the tests with diphtheria antitoxin. With this test Tizzoni's tetanus antitoxin is shown to be very weak. The Steglitz Institute for Testing Sera states that 700 c.c. or ¾ of a liter of the foreign antitoxin would have to be injected to obtain 500 Behring units, such as are contained in 50 to 100 c.c. of the Behring antitoxin. He disapproves of intravenous injections, and still more of intracerebral, but warmly indorses Tizzoni's method of subcutaneous ones as near the point of infection as possible. "There is scarcely any limit in respect to the amount that can be injected in a horse, but in man a single injection should never be over 20 c.c." In the most concentrated form—10 units to 1 c.c. of antitoxin—this would be only 200 units, and this he now considers the maximum amount, instead of 500 as he formerly announced. For prophylactic administration he considers 10 to 20 units fully sufficient.

Assimilation of Food by Newly-Born. H. CRAMER.—To determine the exact quantity of food most desirable for infants up to the tenth day after birth, Cramer instituted numerous series of observations, which have established that there is a certain quantity, which produces the largest increase in weight, and this optimum is the method of feeding which, with the smallest possible amount of food ingested, produces the largest increase in the weight. Strange to say, this optimum is almost exactly the same for breast milk and for cow's milk, as is seen in the table:

	Day.								
	1.	2.	3.	4.	5.	6.	7.	8.	9.
Krueger's method	12 to 15	96	192	284	363	441	501	518	621
Schlesinger's method	0	80	160	240	320	360	400	490	
Breast milk	0	20	70	120	190	260	270	290	300
Cow's milk 1:2	15	30	45	100	170	220	260	290	350

The infants fed by the first method only gained 5 to 10 grams a day, while in the two last series the physiologic development was attained, that is the loss of 230 grams after birth was made up by the tenth day, and surpassed. The proportion of the amount of food that appears in the increased weight with this optimum is 17.1 per cent. in breast-fed, and 18.9 per cent. in bottle-fed infants. In those fed by Krueger's method it was only 1 per cent. The importance of limiting the amount of food during the first ten days is urgently emphasized by these facts; which have never been systematically studied before, and neglect of them has undoubtedly led to many mis-

takes in the study of absorption and analysis of excreta in infants. The physiologic development of the infant with such a small amount of artificial food certainly indicates that the assimilation of the food, and especially the splitting of the nitrogenous substances, occurs as perfectly with cow's milk as with breast milk. Establishing the physiologic minimal amount will afford a reliable test for the actual value of artificial foods. Another point studied by the writer was the amount of force exerted by the infant in sucking. He found it much greater than generally assumed. Breasts, mechanically aspirated and the amount of resistance measured with the manometer, showed that a negative force of 58 to 140 cm. of water was required to obtain the milk in some cases, and this explains why infants go to sleep after nursing the breast, from fatigue. A nursing-bottle does not require more than 3 to 8 cm. negative force, and the milk is obtained in a small fraction of the time. This extreme difference between the labor of natural and artificial feeding may have an appreciable influence on the metabolism.

Muenchener Medicinische Wochenschrift, January 2 and 9.

Influence of Fluorescent Substances on Infusoria. H. v. TAPPEINER.—The Paramecium caudatum is destroyed in a one per million solution of phenylacridin in a few hours. Acridin is also poisonous in a lesser degree. Tests with the hanging-drop showed that equal parts of a 1 per 1000 solution of acridin killed it immediately; 1 per 5000 in thirty, and 1 per 10,000 in sixty minutes. But the astonishing fact was discovered that a 1 per 20,000 solution, exposed to the sunlight, killed the infusoria in six minutes; exposed to diffused light, in about an hour, while in the dark the infusoria were still alive after 100 hours. The sunlight alone has no destructive influence on the infusoria, and neither has the acridin solution alone. Tests with other substances showed that only the fluorescent have this singular property of killing in combination with sunlight, which develops the fluorescence, while they are harmless to the paramecium transferred to the dark. They are also harmless even in the light, if fluorescence is prevented. Further experiments established that the paramecium is not destroyed by the effect of the fluorescent light, but by the process which excites the fluorescence. O. Raab, who made the tests, believes that fluorescence is a transformation of the energy of the rays of light into chemical energy, similar to chlorophyl—"another highly fluorescent body"—only with the difference that this transformation is destructive to the paramecium, while in plants it is a vivifying process. The influence is probably not limited to the paramecium, and should be studied in the skin, cornea, blood and lymph serum, which are also slightly fluorescent. Fluorescence should also be studied in another direction, as possibly the ingestion of fluorescence-producing substances, combined with phototherapy, might produce unexpected results. Raab calls attention to the "hitherto mysterious affection that sometimes appears in light-colored sheep and swine after eating buckwheat on sunny days, possibly due to the formation of fluorescent substances out of the feed." "Therapeutics may yet benefit by fluorescence, as photography has empirically learned the value of eosin and other fluorescent substances for sensitizers."

Strange Influenza Eruption. RIEGER.—Two persons besides Professor Rieger himself, all residing on the same floor, after insidious manifestations of influenza, with a peculiar itching of the scalp and face, for some months, passed through a similar experience: a chill, high fever and a marked swelling of the entire scalp, the veins prominent and every appearance of a subcutaneous effusion, especially at the worst itching points which had been scratched thin and protruded beyond the rest, each at a sweat gland. This swelling lasted twenty-four hours, when the forehead became affected in the same way, "the scalp returning completely to normal after its water-bag appearance." After the forehead, the roof of the nose and the nose and cheeks were affected in turn, each region swollen separately for twenty hours and then returning to normal, with no scaling, nor erysipelatous inflammation. In four days the symptoms, including the fever, all passed away, leaving extreme depression and weakness, as usual after influenza. The swelling seemed to be restricted to the points directly over the bones.

Convulsions in Children. J. LANGE.—This address, read at the Congress of Physicians and Naturalists, goes over the same ground as the articles and discussions reported in the last volume of THE JOURNAL, but Lange warns against too small doses of the bromids: "We can tranquilly prescribe a teaspoonful every two hours, of a 5 per cent. solution of bromid, and with children over a years old a 'child's spoonful,' until the seizures are arrested." He also warmly recommends phosphorus for so-called idiopathic convulsions. In forty-eight or seventy-two hours, the most rebellious and inveterate convulsions are arrested, and if the phosphorus is kept up for a few weeks, they do not recur. This applies not only to rhachitic children but to those in whom the convulsions are induced by autointoxication or other causes. He is convinced that phosphorus has a direct antispasmodic action, and mentioned an experiment with a three-weeks-old dog, to whom he administered 0.002 phosphorus internally for six days, while the control pup of the same litter did not receive any phosphorus. Each dog was then injected with 1 mg. of strychnin. The phosphorized dog was only slightly affected and recovered completely in twenty minutes, while the other had most intense tetanic convulsions vomiting, etc., and was only kept alive with ether.

Hemorrhages from Endometrium in Sclerosis of Uterine Arteries. M. SIMMONDS.—The writer, who is prosector at Hamburg, states that he finds apoplexia uteri in every third or fourth elderly woman who comes to dissection, but that this condition is probably a pre-agonal process in vessels affected with arteriosclerosis. Curetting does not reveal arteriosclerotic processes in the endometrium but if other causes are excluded, in case of obstinate uterine hemorrhages, arteriosclerosis should be borne in mind and the organ removed as a last resort.

Application of Photographic Developers to Histology. SALGE AND STOELTGER.—The preparations were laid in a 0.5 per cent. solution of silver nitrate for three minutes and then, after rinsing in distilled water, transferred to a 5 per cent. solution of sodium iodid or bromid for one minute; then rinsed and developed with "amidol developer," the same strength as used in photography. The result was a "magnificent staining of the nuclei" with an elective stain for rhachitic bones, and remarkable differentiation of the osteoid substance of decalcified objects. This method of staining is a distinct advance, a special advantage being the superiority for photographic reproductions. If the stain is not strong enough, the process can be repeated as often as necessary. The photographic method of "strengthening" with uranium also proved another progress. Preparations thus treated acquired a handsome reddish-yellow tone, and proved particularly fine for microscopic study and colored projections. Lithio-carmin seems to be the best contrast stain for the merely silvered preparations, and methylene blue or water-blue iii, B, for the uranized.

Centralblatt f. Gynaekologie (Bonn), 1899, 5.

Treatment of Serious Interference with Birth Consecutive to Vaginofixation of Uterus. W. RUEHL.—The fetus in such conditions is pressed toward the promontory, the fundus is low, the cervix high, and as the small pelvis is bridged by the anterior uterovaginal wall, there is no room for the passage of the child. The writer has incised, in three such cases, the anterior lip of the cervix and the anterior uterovaginal wall, making an opening large enough to admit the hand, through which the fetus was easily extracted, with no injury to the mother, one living child. The uterus is then drawn out to the vulva and sutured at once. The chief advantage of this operation over Cesarean section is that it is extraperitoneal. Another advantage is the absence of danger from hemorrhage from laceration of the vagina from efforts to raise the uterus. In eight such cases in literature, treated with Cesarean section, 50 per cent. of the mothers died. "Correct vaginofixation, in which not the fundus but a lower part of the uterus is fastened to the vagina, will not interfere with later births."

Sore Nipples.

℞. Olei olivæ.....5iv
Lanolin
Petrolati, ää.....5iv
Acidi borici.....gr. x
M. Sig. Smear the nipples gently and cover with antiseptic gauze.

Societies.

Weber County Academy of Medicine.—The annual election of officers of the Academy, which was recently held, resulted as follows: president, George W. Baker; vice-president, John D. Carnahan; secretary, John S. Gordon; treasurer, S. L. Brick; librarian, G. W. Perkins.

Mercer County Medical Society.—The following are the newly-elected officers of this Society, chosen at the recent meeting at Greenville, Pa.: president, J. C. Bachop, Sheakleyville; vice-president, J. C. Weidman, Mercer; secretary, J. T. Shutt, Greenville; treasurer, F. G. Byles, Fredonia.

Dauphin County Medical Society.—This Society met in Harrisburg, Pa., January 17, and elected the following officers for the ensuing term: president, Marion Ulrich, Millersburg; vice-presidents, George B. Kunkel and W. E. Wright, Harrisburg; secretary, P. A. Hartman, Harrisburg; treasurer, E. H. Coover, Harrisburg.

King County Medical Society.—At the annual election held in Seattle, Wash., January 15, this Society elected the following officers: president, R. W. Schoeuie; vice-president, J. H. Lyons; secretary, Chas. B. Ford; treasurer, Samuel J. Holmes. The business meeting was followed by the annual banquet at the Ranier Club.

Seaboard Medical Association.—The Seaboard Medical Association of Virginia and North Carolina met at Newport News, Va., early last month. Officers for the current year were elected as follows: president, Henry W. Lewis, Jackson, N.C.; first vice-president, Fletcher Drummond, Jarksley, Va.; second vice-president, M. Bolton, Rich Square, N. C.; treasurer, C. O'H. Laughinghouse, Greenville, N.C.; secretary, John R. Bagby, Newport News, Va.

St. Joseph Medical Society.—This Society held its annual election of officers, at its regular January meeting. The following were chosen: president, Jacob Geiger; vice-president, G. L. Sherman; treasurer, W. T. Elam; secretary, John M. Bell. A resolution deprecating the Gallinger antivivisection bill, now before Congress, was introduced and passed. W. T. Elam read a paper on "Internal Urethrotomy." He divides all anterior strictures (organic) with a probe-pointed scalpel, then keeps the track patulous by frequent sounding. He has never had any uncontrollable hemorrhage.

New York County Medical Association.—At the last meeting of this Association, a resolution was introduced by Dr. John T. Nagle, calling attention to the present status of acting assistant-surgeons of the United States Army, as compared with those of the navy, and asking that the delegates from the Association to the state association and also to the AMERICAN MEDICAL ASSOCIATION be requested to bring to the notice of these associations the good points of Senate Bill No. 1782, introduced into the United States Senate last month by Thomas C. Platt. The matter was referred to a committee for advisement. The bill is printed in our "Miscellany" columns, this week.

Chicago Academy of Medicine.

Jan 12, 1900.

CASE OF SYPHILIS.

DR. L. BLAKE BALDWIN showed a case of syphilis, in a male, German, unmarried, and 37 years of age. When seen on Nov. 4, 1899, there were four ulcers in the vertex, each 2 cm. or more in diameter. Over the right supraorbital ridge was an ulcer about 1.5 cm. in diameter. These ulcers were covered with a crust from 5 to 10 mm. in thickness. The entire nose was gone, as far back as the bony septum, the remaining portion being a crust barely 1 cm. in thickness. The left side of the soft palate was entirely destroyed and the right badly ulcerated. On the right arm was an ulcer about 1.5 by 2 cm. in dimensions. The right forearm, from above the elbow-joint to the wrist, on its extensor surface, presented an almost continuous ulcer. The left presented the same condition, excepting that the elbow-joint was not involved. Both thighs, on their external surfaces from the upper third to the knee, presented numerous ulcers. On the inner surfaces were several ulcers. The tibial surface of both legs from the knee-joint to the ankle was an almost continuous mass of ulceration. The calf of the left leg was covered with an ulcer which extended from the junction of its upper and middle thirds to near the ankle, and transversely to an extent nearly one-third of the circumference of the limb. The right great toe had on its extremity an ulcer which had progressed nearly to the bone. The second toe of the same foot was covered with an ulcer extending from the base to the tip. The discharge from these was exceedingly profuse and fetid. In addition to the areas of active ulceration, there were the remains of over eighty lesions on the man's trunk, none of them less than 1 cm. in diameter, and ranging in size from that up to half the size of one's hand. For the most part, these lesions had healed. All the eruptions had taken place within the previous fourteen weeks. The patient declined from 178 pounds to 90 within that time. He gave a history of chancres seven years previously, which had been cauterized, and after a few weeks' treatment he had been discharged as cured.

He was placed on the following treatment: Wet bichlorid of mercury dressings were applied to all ulcerated surfaces, excepting on the cranium, and ordered kept constantly wet, being renewed once in twenty-four hours. After the first week the wet dressing was applied to the head, a few days being required to remove the crusts and to stop suppuration. Internally he was given the pure juice, flavored with salt and pepper, from five pounds of beef, daily, and this amount was increased during the first week to that from eight pounds of beef. He was also given 40 gr. of iodid of potassium, t. i. d., the dose being increased to 15 gr. t. i. d., during the first week. Following the removal of the crusts and cessation of the suppurative process, the ulcers were dressed with Unna's emplastrum hydrargyrum mull. On the eighth day he sat up in bed to eat, on the tenth he walked with crutches, and on the fourteenth he walked to his meals unassisted. He now weighs 187 pounds.

MYCOSIS FUNGOIDES.

DR. BALDWIN also presented a Polish woman, 40 years of age, married, on whom, 11½ years ago, a pimple appeared on the left cheek, and gradually extended and spread over the nose, both cheeks and surrounded the eye, producing pronounced cicatricial ectropion and leaving white scar tissue in place of the normal skin. The process was painful and itched. From the face the lesion spread to the right side of the neck, where it remained quite stationary for about seven years. During the past three years the activity of the process has been revived, and it now completely encircles the neck, extending in front of the right ear on to the cheek for about 5 cm. in front of the inferior maxillary angle, and down the sternum as far as the ensiform.

Within the past year a separate lesion has appeared on the right breast, which now measures about 6 by 15 cm. A new lesion has appeared in the past three months, on the face, beginning as a pimple on the right cheek near the base of the nose and about 2 cm. below the right eye. From here it has extended to the bridge of the nose, in a mesial direction, and as far laterally as the corner of the mouth, and reaching from this point to the lower border of the right eye. The seat of this one is entirely on the location of the original eruption eleven years ago. A lesion has appeared within the past nine weeks, on the abdomen near McBurney's point, which now measures about 6 cm. in diameter. About seven weeks ago another appeared on the anterior surface of the right thigh, which now measures about 4 by 8 cm. in extent, and within the last three weeks two more lesions have appeared on the left inguinal region which now measure about 3 cm. in diameter. The later eruptions have the appearance of a fungoid exerescence, and are raised above the surrounding tissues from 2 to 5 mm. Looked at from above, they have the appearance of a cauliflower mass that has been tightly compressed together. For the most part the surfaces of the excrescences are quite flat and even; those on the abdomen are less so, and are sunken and irregular in the center. The older eruptions have a less elevation than the more recent, but all are distinctly elevated. The color of the later eruptions is a light red with a tinge of purple. The one on the face is more of a brown. They are firm to the touch. The ones on the thigh and the neck are very sensitive and painful; the one on the neck itches; the others

are not painful. About the margin of the eruptions on the abdomen is an area about 1 cm. in width and dark and angry-looking. About the one on the thigh this is less marked; and about the older ones still less so.

The original eruption on the face, eleven years ago, began as a black pimple, from which a history of but little discharge was obtainable. The eruptions on the breast, the thigh, and the abdomen began, in the patient's own words, as "small swellings having a covering like tissue paper," which broke with discharge of fluid. From time to time crusts have appeared which have dried up and fallen off. At present the application of an oily preparation seems to prevent their formation. There is little oozing. At times there is some fetor. The inguinal glands are not enlarged. The epitrochlear glands are not palpable. During the past two weeks there has developed anesthesia to touch and pain and some paresthesia in the ulnar region of the right hand, extending from the wrist to the tip of the ring and little fingers. There has developed, within the same time, tenderness with rheumatoid pains over the entire left tibia.

The patient has borne fifteen children, nine of whom are dead, and the others living. There is no history of any sore throat nor falling of the hair, nor any necrotic ulceration. The lesions have always appeared distinctly raised above the surrounding tissues. The husband came to this country 1½ years before the wife, but reveals no history of sore throat, falling of the hair, nor eruption of any kind. The patient was well-nourished, there being considerable excess of abdominal adipose tissue. She sleeps poorly on account of pain, and for the past six weeks has had little appetite.

Dr. Baldwin is inclined to believe that the case is one of epithelioma. The microscopic findings are these: Histologically, an epithelioma; atypical epithelial cell proliferation into the deeper tissues. Sections were stained for tubercle bacilli, but none found, though stained by thionin, methylene blue and the Klebs, and triple stained for protozoa; deeply staining bodies with hyaline rings in epithelial cell masses were probably protozoa. A few organisms were found with double contour.

DR. WILLIAM L. BAUM said the treatment of the first case presented had been very successful, and illustrated the necessity of treating these energetically. The diagnosis had been made some time before by the attending physician, and the patient had, at the time he saw the case with Dr. Baldwin, several healed spots.

The second case was interesting and instructive on account of its apparent rarity. The history, its long duration, the successive itching, followed by the gradual spread of the disease toward the periphery, and its fungoid-like character, bespoke for it the condition known as mycosis fungoides. As the essayist was giving a description of the case, Dr. Baum thought it doubtful as to whether lupus was present, but after the histologic examination, the appearance of the tumors, and the clinical history, he was led to believe otherwise.

[Here he passed around photographs from Kaposi, illustrating characteristic cases of mycosis fungoides, which differed materially in some respects from some of the published cases in this country.]

Mycosis fungoides can be divided into stages. In some cases eczema is the primary condition, followed later by the fungoid hypertrophies so characteristically shown in the patient exhibited.

As regards the blastomyces found in Dr. Baldwin's case, it was questionable in his opinion whether these were not entirely accidental infections. At the present time it has not been satisfactorily demonstrated that blastomycetic dermatitis is a distinct clinical entity, just as the case under consideration was not, strictly speaking, an epithelioma in its beginning, but became secondarily so and belonged to the atypical forms.

DR. EUGENE TALBOT asked in what percentage of syphilitic cases the bones of the face and jaws are affected.

DR. BAUM replied that in only a small percentage are there demonstrable lesions of the bones of the face, particularly in untreated and in those cases in which one mild measure of treatment had been carried out. Some of the bone lesions, i. e., necrosis of the maxilla, are caused by hydrargyrum stomatitis.

DR. DAVID LIEBERTHAL agreed with Dr. Baum in the diagnosis of mycosis fungoides in the second patient. He thought epithelioma could be excluded on account of the appearance of the lesions. In the center of the more recent eruptions there

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was almost no visible infiltration, while the margins presented dense and prominent infiltration rings, a condition not usually observed in epithelioma. As to the case being one of atypical epithelioma, it is comparatively easy to account for this supposition, as the microscopic findings in cases of mycosis fungoides are misleading in many respects.

In reference to the presence of blastomyces in this patient, he is of the same opinion as he expressed after the first case of so-called blastomycetic dermatitis in Chicago was presented to the Chicago Medical Society by Drs. Hyde, Bevan, and Hektoen, viz.: that there is no such thing as blastomycetic dermatitis *per se*, but that blastomyces is found secondarily to previous lesions.

DR. HAROLD N. MOYER said the experience of the essayist thoroughly corresponds with his own in regard to the administration of large doses of the iodids. In nervous syphilis it is necessary to use large doses of iodid of potassium; it is bad practice to begin with small doses and work to larger ones. He has yet to see his first case of severe iodism from the administration of large initial doses of the iodids. In a case of cerebral tumor, in which he gave the patient a saturated solution, the dosage was so rapidly increased that the patient reached

750 grains in seven days from the beginning of treatment. Large doses have less effect both on the mucous membrane and the skin. He said that an explanation of the peculiarity of the iodids has been offered by a French writer—V. Cyon—who states that small doses of the iodin salts combine with certain products of the thyroid gland, forming iodothyrin, and this circulating in the blood produces constitutional symptoms. On the other hand, if large doses of the iodids are administered, they act as diuretics and are promptly eliminated by the kidneys in the form of soluble salts.

DR. BALDWIN, in closing the discussion, said that the secret of giving large doses of iodid of potassium was to give plenty of water. In reply to the question of Dr. Talbot, he said he had seen eight cases of syphilis in which there was destruction of the nasal bones from this disease.

NON-SYPHILITIC RESULTS OF SYPHILIS.

DR. J. J. QUIRK read a paper with this title, and said that some sixteen years ago, in a discussion of the relation of neuroses to syphilis, the claim was made by E. Fournier that syphilis does not produce true paretic dementia, but a symptom-complex mimicking that disorder, though distinct in type and therapeusis. This view was combated by Kiernan, who, at the end of an analysis of the evidence *pro* and *con*, pointed out that paretic dementia produced by syphilis does not necessarily differ pathognomonically in onset, in clinical progress and resistance to therapeusis from the non-syphilitic type.

Some ten years later Bannister advanced evidence to show that paretic dementia was a toxin disease. Hutchison of London had advanced the view that certain irregular types of teeth were diagnostic of inherited syphilis. Eugene S. Talbot, after analyzing numerous reported and many observed cases, pointed out that the so-called Hutchinson teeth often arise from congenital conditions other than those of syphilis. Some eight years ago, in a paper read before the Chicago Academy of Medicine, G. F. Lydston pointed out that syphilis exerts an influence on the repair of surgical lesions.

Within five years after the discussion referred to above, Fournier abandoned the stand he had taken, and enunciated a now-generally-accepted view which is an application of the principle advocated by Kiernan. Hutchinson, after a more extended study, found that one-third of the cases of Hutchinson's teeth occur, as Talbot had pointed out, in non-syphilitic subjects. Since that time, while not generally recognized by the profession, or even by some syphilographers, non-luetic results of syphilis, or syphilitic dystrophies, have attained great importance, and frequently appear in the literature.

In essence, the non-syphilitic phenomena of syphilis are best illustrated in the influence of syphilis during the intrauterine periods, at the periods of stress, and the periods of involution—male and female, climacteric, senility, etc. Dr. Quirk dealt only with the periods of intrauterine life, and of evolution—dentition, puberty, etc. There are, he said, as Fournier remarks, two hereditary expressions of syphilis which are essentially expressions of direct or indirect etiologic influence respectively. The first of these is the transmission of syphilis as syphilis from the ancestor to the descendant. The second is the transmission, from the ancestor to the descendant, of sundry pathologic characteristics, having nothing syphilitic in type per se, but consisting in the reactions—to the syphilitic defect of constitutional imperfection and an element of embryonic development shown in the arrest of development—to the shock of syphilitic infection of the parental constitution. The first of these congenital conditions constitutes syphilitic heredity properly so-called. The second has been designated by various terms which evince its complex expression: parasyphiloses, dystrophies, toxinoses, etc. In dealing with these last types two factors have to be taken into consideration; embryologic states and the influence on these exercised by the paternal and maternal organism as influenced by syphilitic infection. Perhaps the most demonstrable and most familiar instance of syphilitic shock to embryonic development is the arrest of the fetus at the senile or simian period of embryologic development, i. e., at about 4½ months of intrauterine life. The old age appearance of a congenital case of syphilis is not an expression of syphilis per se, but an arrest of development of the fetus at the so-called senile period. Every one of the degeneracy stigmata may, however, be produced by syphilis of the ancestor.

DR. WILLIAM L. BAUM said that the arrest of nutrition in the syphilitic mother, as having a bearing on the child, is of exceptional interest to the general practitioner, as well as to those who are interested in special lines of work. There may be pre-existing syphilis in the parent, but this should not always be held responsible for arrests of development as observed in the child. There are many patients with arrest of development, supposedly specific in nature, who present notched teeth, etc., which are found in the non-specific and in chronic exanthemata like ichthyosis and psoriasis. He has examined children in a family in which there was no specific history given, although all the children had notched teeth. The same thing holds true of some of the nervous lesions which are attributed to syphilis. A paresis might be due to a nutritional change having syphilis as its exciting cause, still there are factors other than syphilis which may be responsible for similar changes in nutrition.

DR. L. B. BALDWIN said he knew of a family of five, all of whom had the typical Hutchinson teeth, and yet there is no history of syphilis in the family. All of them have had psoriasis. One member consulted a New York specialist at one time; he examined the teeth and said the condition was due to syphilis; consequently, in treating the psoriatic eruption he did not get good results, because he did not treat the patient for psoriasis.

DR. JAMES G. KIERNAN said that some seventeen years ago, in an article which appeared in the *Alienist and Neurologist*, he took the position against Fournier, that paretic dementia might occur from a syphilitic etiology without responding either to the ordinary clinical phenomena of syphilis or to therapeutic tests. Fournier at that time took the ground that there was a true paretic dementia which arose idiopathically, and that there was a syphilitic paretic dementia which respond-

ed to therapeutic tests. Since then Fournier has abandoned that idea, and now takes the position that paretic dementia and locomotor ataxia are both parasyphiloses.

Dr. Quirk said but little about one of the phenomena which is ordinarily charged to congenital syphilis, namely, the old-man appearance of the child. The child presents a senile appearance resembling certain of the anthropoid apes, and an arrest of development at the period of 4½ months or more would produce the senile type in the child.

Souques, about two years ago, reported and illustrated a number of cases in which this senile condition occurred—independent of syphilis—during childhood and persisted after maturity. The explanation, in Dr. Kiernan's opinion, is that the syphilitic influence, like any other, so checks the development of the child in certain parts that it is born with a senile appearance.

DR. EUGENE S. TALBOT said that Jonathan Hutchinson never intended that his name should be used, as it has been for the last fifteen years, in regard to the peculiar form of teeth named after him. He distinctly stated that only about 10 per cent. of the cases of syphilis present notched teeth. In the opinion of Dr. Talbot, any constitutional disease, or any condition of the mother in which there is starvation or worry, causing malnutrition, will produce this arrest of development of the fetus *in utero* at about the time of the third to the fourth month. The teeth begin to develop at the sixth week of fetal life. Dr. Talbot referred to their evolution from the shark up to man and spoke of their shapes. The arrest of development is simply a return to the atavistic condition. The structures of the face, jaws, alveolar processes and teeth are transitory, and therefore more liable to become affected than any other structure of the body. It is for this reason that he asked Dr. Baum and the essayist in what proportion of the cases coming under their observation they had noticed a change in the tissues of the face and jaws. It is expected that these structures are the first to be involved on account of the transitory condition of the jaws, the teeth and the face.

College of Physicians of Philadelphia.

Section on Otology and Laryngology, Dec. 20, 1899.

CASE OF NEVUS OF THE TYMPANUM.

DR. E. B. GLEASON exhibited a man, 45 years of age, who presented a small, dark-colored growth in the posterior portion of the tympanum. There was no history of injury. The patient came to him on account of increasing deafness and occasional bleeding from his ear. At the first examination, a small incision was made in the growth, in order to determine its character, whether cystic or the bulb of the jugular vein; but these were excluded. There was only slight leakage, instead of a free hemorrhage, which would have resulted if it had been the vein. The next week a free incision was made deeply into the growth, and its interior touched with crystals of carbolic acid. As a result there was leakage for a day or two and the growth became somewhat smaller. The patient said he had undergone a long course of massage treatment of the ear for deafness about three years ago, but had not been benefited.

QUERY—What effect, if any, did the pneumomassage have on the development of the growth?

DR. GLEASON—Since making the incision the patient has declared that his hearing is improved. The tumor apparently had its origin from the posterior wall of the tympanum, and it was attached there rather than to the drum-head, which was projected in front. Examined with the Siegle speculum, the growth was found to move with the membrane, and did not undergo any change in color. The patient had not suffered with any exanthematous disease. The bleeding from the ear was not profuse nor constant. It would bleed for a night or two, then it would stop, and perhaps recur in a week. It began bleeding three or four years ago, about the time he first noticed the deafness. It had not bled, however, before the massage treatment was instituted.

DR. CHAS. H. BURNETT said that vascular tumors of the tympanic membrane are of rare occurrence. Buck, in his third volume on Otology, describes a case with such a small vascular tumor, occurring in a woman, 82 years of age; it was a small cyst in the lower portion of the membrana tympani. In 1879, Buchner described a hematoma in the ear of a pregnant woman. In the present case, from an imperfect examination, he thought that the whole drum membrane looked blue, as if it were all involved in the growth.

DR. B. ALEX. RANDALL said that the appearance of the drum-head was more pinkish than blue, to him. The tumor might be of cystic character, but he was not inclined to look on it as a hematoma. These tumors usually are attended by a great amount of bleeding, sometimes requiring tamponing of the canal to check it: The reporter is to be congratulated that he did not have a severe hemorrhage after his incision. Chromic acid is preferable to carbolic in such cases. He would first clean the canal and then apply cocain to the growth before using the chromic acid, which otherwise would be too painful.

TUMORS IN THE LARYNX.

DR. JOSEPH GIBB exhibited a man of 46 years, who two years ago began to be hoarse. After a fit of coughing he expelled a gristly substance from the throat, and this was followed by a slight amount of bleeding. Subsequently he had symptoms of stenosis with a strident cough, and occasionally stridor in breathing. He was first seen by the doctor four weeks previously. At the first examination he found a tumor occupying the left side of the larynx, above the vocal cord, of a pinkish color. There had been no hemorrhage since the first attack, except when a small piece of the growth was removed for examination. The specimen was obtained by an instrument with a Krause handle and a Sherck tube, with the aid of which he succeeded in cutting off two or three small pieces. The microscopic examination showed that it was an endothelial or inflammatory growth, but the pathologist could find no evidence of malignancy.

DR. GEORGE H. STOUT had seen a similar case recently, a woman, who was very hoarse and who was found to have warty-looking growths in the larynx, and also at times had difficulty in breathing. She was in a hospital and had been reported to him as a tuberculous patient; it was said that tubercle bacilli had been found in her sputum, but after treatment for a few weeks the sputum was again examined. No bacilli were found. She came one morning with her voice much clearer, and she stated she had coughed up a piece of flesh like that described in the preceding case. After a course of antisyphilitics, a mild mixed treatment, her condition rapidly improved.

DR. P. S. DONELLAN recalled a similar case. From the prompt response to the therapeutic test he believed it to be of a syphilitic character, and he recommended this test in the patient exhibited.

DR. A. WATSON said that he did not feel like expressing an opinion on the diagnosis without further opportunity for examination. He thought that it had some of the appearance of a malignant growth. Too much weight should not be given to the negative pathologic report. In a case he had seen a few weeks ago, his first conclusion was that it was an inflammatory new growth, the first sections having this character. Later, he took a piece from the base of the growth and it was found to be epithelioma. In the case presented above, the fact that the pathologist gave a negative report might only be evidence that he had a piece from the surface to examine, whereas a piece taken from the base might show a different result. An antisyphilitic treatment might clear up the diagnosis.

DR. D. BRADEN KYLE confirmed the remark of the preceding speaker as to the difference in the appearance of sections taken from different parts of a tumor. A carcinomatous growth often has a papillomatous structure on its surface. This is partially true of growths in the mucous membrane, and in the female mammary gland. In some sections of a growth, made recently, the first, taken from near the surface, showed it to be a warty growth, but deeper sections showed typical carcinoma. In this case under consideration, while it may be warty on the surface, yet it really may be malignant. From his examination of this patient on a previous occasion, he considered it probable, however, that it was a syphilitic growth, and he advised antisyphilitic treatment. Specific inflammatory growths have peculiar characters, and he thought that they were present here.

DR. GIBB said that it was of great importance to establish

a diagnosis in this patient as soon as possible, because, if malignant, the only chance of a successful result depends on its early removal, before glandular involvement occurs. During the time he had been under observation, only four weeks, the time had been taken up in getting the sections for the pathologic examination. He said that he would adopt the suggestion and put the case on antisyphilitic treatment, but he had not much hopes of success, as he was more inclined to consider it one of carcinoma.

PAPILLOMA OF THE LARYNX.

DR. JOSEPH GIBB also read the notes of a case of this affection, in a girl, in whom stridor and dyspnea existed, but a portion of the growth had been removed, affording some relief, though there still remained considerable stenosis, as the result of adhesions of the anterior portion of the cord.

DR. WATSON said that in regard to the method to be adopted, he thought the galvanocautery should be used, after separating the sides of the cords. Not having seen the case, however, he would not discuss the treatment. As to the cause of papilloma in a child of 13 years, the growths may have been congenital. In some cases they may have an acute beginning in a laryngitis, with local ulceration and the formation of nodes on the vocal cords, or if congenital they may develop more rapidly after such acute inflammation.

DR. E. L. VANSANT said that in a case of stenosis of the larynx the choice of operation would depend very much on how thick the cords were and how closely they were bound together. Perhaps divulsion by the use of forceps would be the safest procedure to relieve the stenosis. Or, the forceps as modified by Dr. Gibb might be plunged through the glottis into the larynx, removing all tissue coming between the blades of the forceps as they are withdrawn. The base should then be touched with some cautery. If it were found that the cords were firmly adherent to the papillary growths, on their under surface, it would probably be wiser to operate by scraping.

DR. B. A. RANDALL suggested the possible advantage of separating the cords by the knife, and using the cautery on one side only, as there is much less tendency for a burned surface to unite with one simply cut.

DR. VANSANT said he had observed, after dissecting syphilitic adhesions of the pharynx, that touching the cut surfaces with trichloracetic acid promoted cicatrization more than any other agent that he knew of.

DR. E. B. GLEASON recalled a case of imperforate posterior nares that he had treated by trephining, which was followed by marked tendency to reclosure. This was afterward treated by the galvanocautery, at Dr. Watson's suggestion, and a permanent opening secured.

SPECIMENS OF LARYNX AND TRACHEA.

DR. WM. P. WARMOUTH, by invitation, exhibited wet specimens of the larynx and trachea of three children, showing ulceration and stenosis of the larynx, following intubation for diphtheria, in the Municipal Hospital. In one case the tube had been worn for fourteen days, it was taken out, but dyspnea was so great that it had to be reintroduced; this occurred at every attempt at removal; the tube was reintroduced fourteen times in all. Tracheotomy was then done, but the patient died three days later. The specimens showed extensive ulceration and cicatricial formation.

Two other cases were reported, in one of whom after intubation followed by tracheotomy complete occlusion had occurred; in a second case not tracheotomized, there was extreme stenosis.

DR. FRANK WOODBURY said that without knowing the thickness of the cicatricial adhesion, and judging only from the appearance of the specimens, possibly the performance of external laryngotomy and dissection of the vocal cords might be advisable.

DR. JOSEPH GIBB had had no experience with such lesions following intubation; his patients had either gotten well, or died, without this complication. In regard to the cases reported, he thought that the operation of splitting the larynx and trying to remove what cicatricial tissue can be removed might be advisable. Other scar-tissue would form, but it would be less than that removed.

DR. E. B. GLEASON said that he had examined the case of complete stenosis after it was tracheotomized, and he could not get a tube for a 1-year-old child through. He did not think the operation suggested would be of any use, since the cicatricial tissue would form again, as it involved at least one-half an inch of the larynx and trachea.

DR. STOUT said the case of stenosis might be dilated with the acorn-tipped dilators.

DR. WARMOUTH said that in one case there was absolute occlusion; even a knitting-needle could not get through.

DR. WATSON said that if this were a simple adhesion between the vocal cords or bands, throughout their length, it could be dissected up by external opening of the larynx, and treated by subsequent dilatation, just as any other closed canal. He had seen cases in which, by persistent dilatation, by successive introduction of larger intubation tubes, the opening was restored.

DR. E. L. VANSANT thought that if the smallest kind of an opening could be found, it would be far safer to trust to dilatation than to laryngotomy.

DR. B. A. RANDALL confirmed the last remark, and referred to a case in an adult where dilatation had succeeded. He suggested a study of this case from the tracheotomy opening, in order to determine the extent of the cicatricial tissue, as it might be found to be tracheal rather than laryngeal. Possibly a grooved needle might be introduced from below and the knife passed along it, followed by dilatation, which would be less severe than the external method.

DR. FRANK WOODBURY read a paper on "The Treatment of a Common Cold." It will appear, with the discussion, in THE JOURNAL.

Cleveland Medical Society.

Quarterly Special Meeting, Dec. 22, 1899.

FRACTURES OF THE SKULL.

DR. NICHOLAS SENN, Chicago, read the paper of the evening, on this subject. Visceral intracranial lesions, he said, are of more consequence in determining the necessity for a method of operative procedure in cases of fracture of the skull than are the extent and character of the fracture. The greatest source of danger in these injuries is a complicating wound communicating with the skull contents through the cranial defect, thereby producing grave danger of infection. The examination of the wound for the purpose of determining the exact location and extent of the fracture, and the search for visceral injuries, must be conducted with extreme care to guard against wound infection. Every accidental wound must be regarded as infected, but superficial infection amenable to antisepsis may be made deep and inaccessible by careless diagnostic exploration. No digital nor instrumental examination of the wound should be made until the necessary thorough aseptic preparations have been completed. In compound fractures the entire skull should be shaved and disinfected, and the wound flushed with hydrogen peroxid and a 2.5 per cent. carbolic acid. In basal fractures the ear and nasopharynx should be disinfected so far as possible. Absolute rest in bed is essential in treating skull fractures.

Regarding the practice of some surgeons in trephining all fractures of the vault of the skull, Dr. Senn said that the surgeon who converts a closed fracture of the skull into an open one, without adequate cause, assumes a great responsibility. The present technic of asepsis does not furnish absolute protection against infection. Conservatism is to be recommended in the treatment of these fractures, especially in children. Trephining should be done in case of: 1, subcutaneous fractures in adults with marked depression; 2, subcutaneous fractures attended by focal symptoms; 3, all compound fractures including punctured and gunshot fractures, and 4, fractures complicated by rupture of the middle meningeal artery. The trephine should never be used in the elevation of a depressed fracture, the chisel and mallet being much superior tools. Comminuted compound fractures demand free exposure to determine their extent and to discover foreign bodies, and every bone fragment must be taken out and kept in warm 2.5 per cent. carbolic acid while the wound is disinfected, and replaced in proper position in the skull defect preparatory to closure. If the wound remains aseptic, all the fragments will retain vitality and take an active part in restoring the continuity of the skull. In case of rupture of the middle meningeal artery, and if the bleeding point can not be reached from the seat of fracture, the artery must be exposed and ligated in the temporal fossa.

DR. GEORGE W. CRILE asked Dr. Senn what had been his experience with regard to the occurrence of epilepsy following fracture of the skull, and what results he had secured in such cases from further operation, especially in those of the so-called Jacksonian type?

DR. HUNTER ROBB asked him in what proportion of cases it is possible to carry out any precautions to prevent infection of the scalp or brain, when there is a compound fracture? Frequently it is the rule to expect a septic condition.

DR. C. J. ALDRICH asked him what bad results he had noticed from leaving open the space made by trephining, and whether there is not more danger of irritation resulting from restoring the fragments than from leaving the wound open?

DR. F. E. BUNTS asked whether he had noticed a sign prognostic of death in cases of fracture, which he had learned from experience to consider pathognomonic? It is, in fatal cases—particularly of fracture at the base of the skull—the fact that the patient begins early to manipulate the pubes.

DR. D. P. ALLEN said that he did not feel as conservative as Dr. Senn about going down on the skull, but thought it proper to do so in order to ascertain positively whether there is a fracture, for the reason that he had seen spicules of bone projecting from the internal table and causing death from brain pressure in cases in which the external injury was slight. In reference to asepsis in fracture at the base, he had reported at the last meeting of the American Surgical Association a large number of these cases that ended in recovery, in which no attempt had been made toward asepsis. It is impossible to say how the internal ear and nasopharynx can be rendered aseptic, and it is a question whether damage may not be done in these cases by attempts in this direction. It had been his experience that the dura matter has considerable power of reforming bone, and that openings of small size are thoroughly closed, but that in openings as large as 2½ inches it is useful to replace some fragments. He warmly endorsed Dr. Senn's insisting on keeping these patients absolutely quiet after operation, and had seen some who got up in a short time go on to death without it being possible to discover, at the post-mortem, any sign of injury.

DR. C. B. PARKER'S experience with Jacksonian epilepsy had been similar to that of the essayist, in that there is some temporary benefit from operation, but very few recoveries. He emphasized the necessity of thorough asepsis of the field of operation in these injuries, and thought that the replacement of bone fragments was frequently of some benefit.

DR. N. S. EVERHARD, Wadsworth, asked how it was possible to render punctured wounds of the brain aseptic.

DR. SENN, in closing, said that he had never had much confidence in cortical excision for Jacksonian epilepsy, and while he had performed the operation a number of times with temporary benefit, he had never seen lasting results. Traumatic epilepsy, in his experience, was more freequently the result of intracranial lsions than of change in the contour of the skull. He confessed that the means of effecting absolute asepsis in cases of compound fracture of the skull are very imperfect, yet the attempt should be made in the right direction. He insisted that in every case of fracture of the skull the wound must be considered as infected and the entire scalp shaved and rigidly disinfected. Primary disinfection should be made step by step. He places great value on the replacement of fragments in the opening in the skull, as he has seen as many cases of traumatic epilepsy developing after extensive skull defect as after depressed fracture. He believes the dura to be a very sensitive structure, and that it is the duty of the surgeon to place the parts operated on as nearly as he can in the same mutual relation they previously occupied. Some years ago he made extensive experiments on animals as to the reproduction of bone, and invariably found that extensive skull defects were not repaired, and that the osteogenetic function of the dura mater is extremely limited. He thought this fact was conservative, as otherwise the surgeon would be often compelled to deal with exuberant provisional callus and frequent cerebral complications. He had never seen the symptom mentioned by Dr. Bunts, but thought the observation a very valuable one.

Eighth Annual Meeting, Jan. 12, 1900.

The following officers were elected for 1900: president, H. S. Upson; vice-presidents, J. B. McGee and Lillian G. Towslee; recording secretary, W. O. Osborn; treasurer, J. M. Ingersoll.

MANAGEMENT OF INCOMPLETE ABORTION.

DR. J. H. BELT read a paper on this topic. Dilatory measures in the treatment of incomplete abortion, especially in those cases coming on after the twelfth week of pregnancy, have many sins to answer for. In every case and as soon as possible the uterus ought to be emptied, using the finger for a dilator as well as a curette. The method is a practical one notwithstanding the discouraging comments that have been made as to the possibility of thereby reaching the uppermost portion of the uterine cavity, and if faithfully performed, after-infection need not be feared. It is more tedious and difficult but safer for the general practitioner than instrumental curettage. The dangers of the latter may be seen in connection with the recorded experience of nearly all leading gynecologists in this class of cases, especially when softening of the uterine walls is present to an abnormal degree.

DR. HUNTER ROBB endorsed the statement of the writer that the general practitioner can better handle such cases by removing the contents of the uterus with the finger rather than with the curette, which is a dangerous instrument in inexperienced hands.

DR. H. W. QUIRK pointed out that it is very difficult in some cases to thoroughly clean out the uterine cavity with the finger, and said that he had found the lithotomy forceps very efficient and entirely harmless.

DR. W. H. HUMISTON noted that in experienced hands the dull curette is the best instrument to use, but insisted that thorough preliminary disinfection should be practiced before its use. In the subsequent hemorrhage he uses a stream of hot water from a double-nozzled syringe and then packs the uterine cavity with gauze. In certain cases it is very easy to puncture the uterine wall with any instrument.

DR. M. ROSENWASSER said that he always used an anesthetic when emptying the uterine cavity of retained secundines. He considers the digital method of removal the most thorough, and in cases of puncture of the uterine wall the danger of fatal hemorrhage is not so great as has been suggested.

DR. L. B. TUCKERMAN recently saw several cases of septic infection following abortion performed by irregular practitioners, who had used an ordinary cervical dilator with no antiseptic precautions.

DR. L. G. TOWSLEE always uses an antiseptic in curetting after abortion, and has seen a very severe case of shock in one instance when an anesthetic was not used.

DR. W. H. HUMISTON added that, while it might be possible to puncture the uterine wall with a small sound without causing much damage, yet puncture with a large-sized curette will almost always cause considerable hemorrhage.

DR. J. H. BELT, in closing the discussion, mentioned that the difficulty in thoroughly cleaning the uterine cavity with the finger can be overcome by the use of considerable long-continued force with the other hand pushing the uterus down into the pelvic cavity. In the use of this method he has not met with a case of hemorrhage during removal of the uterine contents, and thinks that when it occurs it is most likely due to the use of the curette. As the use of an anesthetic necessitates the delay necessary to secure an assistant, he usually works without it. The latter part of the operation is usually much easier than the first, as it is the dilation which causes the greatest amount of pain.

ADHERENT PERICARDIUM.

DR. H. W. ROGERS read a paper on "Adherent Pericardium with Report of a Case." The symptoms and physical signs in a large proportion of cases are obscure, yet the condition is not so rare as many suppose. Symptoms and physical signs are often deceptive. Many times those most common to this condition are associated with the more common forms of cardiac disease. A break-down of the right heart, not traceable to some valvular defect in the left side or lung disease, and which does not improve with rest in bed for a few days with proper diet and medicinal treatment, is very suggestive of that lesion.

DR. C. F. HOOVER spoke of the systolic retraction which Broadbent describes as occurring in the posterior axillary line about the ninth, tenth and eleventh ribs. This retraction is not due to synechia cordis, but is produced by the tension of the diaphragm, which is communicated to the ends of the affected ribs. He has seen one case of aortic insufficiency in

which this retraction could be seen to move an entire rib. He pointed out that it is a difficult matter to diagnose systolic retraction at the apex, and has seen cases in which strong diastolic impact led to the conclusion that systolic retraction was present.

DR. H. W. ROGERS, in closing the discussion,, said that in cases in which you can not find any special cause for marked disease of the heart, such as valvular, kidney or pulmonary disease, and in the absence of physical signs, it is fair to suspect some pericardial trouble, and to give an unfavorable prognosis.

New York Academy of Medicine.

Surgical Section, Jan. 8, 1900.

RECURRENT SPINDLE-CELLED SARCOMA WITH GLANDULAR INVOLVEMENT.

DR. W. B. COLEY presented a man, aged 40 years, successfully treated with the mixed toxins of erysipelas and of the bacillus prodigiosus for this condition. The tumor was first noticed in the fall of 1896, and two operations were done at the Bridgeport Hospital, one in March and the other in May, 1897. The patient came to him in August of that year, the tumor presenting every appearance of malignancy, and further operation was out of the question. The growth extended from the left auditory meatus forward nearly to the angle of the mouth, and upward from the angle of the jaw almost to the orbit. It presented an area of ulceration about two inches in diameter. The submaxillary glands were plainly involved. Daily injections of the mixed toxins were given, and, as the man's condition was good, the dose was rapidly pushed up to the point of producing a reaction marked by a severe chill and a rise of temperature up to 104 or 105 F. Slight improvement was noticeable at the end of the week, and when the treatment was discontinued, at the end of ten weeks, the neoplasm had apparently disappeared. During the two years and a half that have elapsed since that time, this man has remained in good health and free from any recurrence. A microscopic examination showed the tumor to be a spindle-celled sarcoma.

CARCINOMA OF BOWEL.

DR. COLEY also exhibited a physician on whom he had successfully operated for this condition. The early history of the patient, that is, for one year previous to April, 1899, strongly pointed to recurrent appendicitis, and on that supposition he was operated on at the Toronto General Hospital. However, instead of finding an appendicitis, the operator discovered a carcinoma of the cecum and of a portion of small intestine which was adherent to it. In May of the same year Dr. Coley operated, removing the cecum and about seven inches of the small intestine. The divided ends of the latter were united by a Murphy button, and a lateral anastomosis made by means of a large oblong Murphy button. The patient has improved greatly since that, and there is as yet no evidence of any recurrence.

DR. J. A. WYETH was inclined to think that sarcoma is sometimes cured as a result of the acute inflammatory process excited rather than by the direct influence of the mixed toxins. As a case in point, reference was made to a case of sarcoma of the abdominal wall, that he had cured by injections of arsenious acid. This occurred fifteen years ago, and the cure has been permanent. The fact that sarcoma might be cured by an acute inflammatory process does not prevent him from believing that Dr. Coley's method is as scientific as it has been successful.

TREATMENT OF AORTIC ANEURYSMS.

DR. J. M. T. FINNEY, Baltimore, Md., read a paper on this subject, and stated that the French method of injecting gelatin had been tried in nine cases at the Johns Hopkins Hospital, and while none of the patients had been cured, the method seemed to possess a certain amount of merit. The great drawback to it was the pain caused by the injections. They had had more success with the method of "wiring." The needle should be sufficiently large to allow of the easy passage of the wire and, except for a distance of 1 cm. from its tip, should be insulated by a coating of the best black French lacquer. As this coating will not stand boiling, the needle should be sterilized by exposure to a temperature of 160 F., in a compartment for one hour. A series of experiments, undertaken with a view to determining the best wire to use, and the most suitable strength of the electric current, resulted in the selection of a current of 20 milliamperes and of a wire made of 75 parts of copper to 1000 of silver, and drawn down from No. 8 to No. 27. As to results, in 35 per cent. of the reported cases there was evident improvement and prolongation of life, and both clinical and post-mortem evidences attest the efficacy of the treatment.

DR. WYETH, from a careful study of the literature of aneurysms, felt constrained to express his preference for a thorough trial of the rest and iodid treatment before resorting to either deligation or wiring.

DR. P. BOLTON stated that the gelatin injections were used in four patients, at the Hudson Street Hospital, during the last year, but none was cured, and all suffered much pain, while some also had chills and fever.

Philadelphia Obstetrical Society.

Jan. 4, 1900.

ANENCEPHALIC MONSTER.

DR. H. C. LABGEMAN, by invitiation, presented this specimen. The mother was 21 years old, a primipara, and had been married ten months. She and her husband were healthy, and the family history showed no deformity in either branch. When the patient was first seen she had been in labor for about two hours. The abdomen was small. The fetal heart sounds were absent. On digital examination a face presentation was diagnosed. Two hours later the fetus was expelled. A large amount of amniotic fluid surrounded the fetus, which was an anencephalic monster with great defect in the development of the cranium and brain, the head and forehead almost absent and the eyes bulging out on either side. There was double harelip, and broad shoulders and chest. The child was a female. When about two months pregnant the mother was greatly frightened at a rattlesnake which had been stepped on by her brother, and which she thought had bitten him.

DYSTOCIA FROM AN ANENCEPHALUS.

DR. GEORGE M. BOYD reported a case of dystocia due to an anencephalic child. The mother was a Russian, 28 years of age, a primipara, and polyhydramnios was present. She was delivered at term, the labor being a protracted one, podalic and cephalic version being necessary. The diagnosis was not definitely determined until she was put under anesthesia. As soon as it was established, the blunt hook of a traction forceps was introduced under the armpit and the child, weighing eight pounds, delivered. The speaker called attention to the importance of the necessity of anesthesia in these cases, as it aids greatly in making a careful digital examination, which is of prime importance.

OMPHALOCELE.

DR. W. REYNOLDS WILSON reported a case of omphalocele with specimens and photographs. The mother was a primipara, 40 years of age, and hydramnios was present. When seen, the labor had progressed for about two hours and the pains were moderate. The child weighed 6¾ pounds, and was well developed except for the abnormality in the region of the umbilicus, at which point a hernia was present. From the lower surface and near the junction with the abdominal wall the umbilical cord made its attachment. He considers these cases no doubt due to faulty development.

DR. E. E. MONTGOMERY, in discussing these papers, mentioned having seen a malformation similar to that presented by Dr. Wilson, which had been born in the Philadelphia Hospital. In this instance, however, it was found that a twin pregnancy had occurred, and that there was firm union at the umbilicus. Death had occurred. The mother was a primipara, and the children both males.

Philadelphia Pediatric Society.

Jan. 9, 1900.

CONGENITAL HEART DISEASE.

DR. S. M. HAMILL presented a girl of 11 years, with this trouble. The history showed that labor had been normal at her birth, while two sisters are living and in good health. She has been healthy until four years ago, when she began to lose flesh, and lately she had recurrent attacks of tonsillitis.

When seen on Dec. 14, 1899, she complained of headache, cold hands, and dyspnea on slight exertion. There was no clubbing of the fingers and she has never been cyanosed. In the precordial region there was bulging with apex-beat in the fifth interspace and the mid-clavicular line. The beat was forcible, and a thrill was detected on palpation. Auscultation revealed a systolic murmur, heard loudest in the second left interspace, and not transmitted to the vessels of the neck. While the adventitious sound might have been due to pressure of an enlarged bronchial gland, postnatal endocarditis, or congenital heart disease, most of the signs pointed to congenital heart disease. The essential lesion appeared to be pulmonary stenosis, or patulous ductus arteriosus.

DR. F. R. PACKARD agreed in the diagnosis of pulmonary stenosis but could not agree that it was congenital. He was aware that a number of such cases had been reported, yet some of them might be open to doubt.

MILIARIAL ERUPTION IN SCARLET FEVER.

DR. J. P. CROZER GRIFFITH read a paper on the occurrence of this, and reported several cases. Many text-books give this question only casual attention, while some writers have spoken of a sudaminal rash occurring in this disease. Some believe that vesicles or sudamina are to be found only in severe cases of scarlet fever, but he considers miliaria not an uncommon accompaniment, although he does not agree that the patients with miliaria desquamate to a greater extent than those without it. Four cases of scarlet fever were reported; in all this condition was present, and yet the disease was not especially severe, and the desquamation progressed in the usual way.

DR. ARTHUR VAN HARLINGEN believes a distinction should be made between miliaria and sudamina—the former an inflammation of the sweat glands. The latter, simply an occlusion of the openings, he thinks might be due to hot clothing.

DR. JAY F. SCHAMBERG expressed the opinion that the amount of desquamation depends on the degree of vesicular eruption.

Philadelphia Academy of Surgery.

Jan. 8, 1900.

SARCOMA OF THE INTESTINE.

DR. RICHARD H. HARTE exhibited a sarcoma of a child's intestine. The child was about 5 years of age, and was admitted to the Episcopal Hospital in October, 1899. The parents stated that the growth had only been present about a month, but this was undoubtedly wrong. The history, however, indicated a very rapid growth. The etiology of these cases is obscure. In this case there was a history of traumatism. On admission the abdomen was tympanitic and pressure in the region of the right iliac fossa detected an indistinct mass. The heart and lungs were normal, the spleen slightly enlarged. In many respects the case resembled one of tubercular peritonitis. Under anesthesia the abdominal muscles relaxed greatly and the masses could be more easily outlined. An exploratory incision evacuated a small amount of bloody serum. After removal of a part of the mass for microscopic examination, the wound was closed and a drainage-tube inserted. In reviewing the literature the speaker found that but very few cases of sarcoma of the intestine have been reported. Of thirteen, the majority occurred in persons over 40, and, as a rule, terminated fatally, within two months. In this instance the growth doubtless began in the submucous and afterward involved the lymph tissue.

DR. W. W. KEEN stated that he had once seen a similar tumor, but the growth involved the stomach instead of the intestine.

RESECTION OF WRIST-JOINT.

DR. W. J. TAYLOR exhibited a case of resection of the wrist-joint by a modification of Mynter's method. The patient was a man of middle life, who had suffered from the usual diseases of childhood, and numerous abscesses in various parts of the body. He was tuberculous. About two years ago a pain developed in the region of the wrist-joint, which afterward became swollen and evidences of involvement of the bone were present. The man was placed under ether and an Esmarch bandage applied above the joint. An incision was made on the dorsum, from the lower end of the radius downward between the second and third fingers. No tendon was divided except that one attached to the carpal bone. A splendid view of the entire joint was given and the tuberculous bone easily removed. The heads of the bones forming the joint were then removed by a saw, the wound packed with iodoform gauze and the edges of the wound united by silkworm gut. A splint completed the dressing. The wound has now firmly united, sensation is intact and the man is able to move all the fingers slightly. The result, therefore, is a good flail joint.

DR. R. H. HARTE considers the result most satisfactory. Ordinarily an excision of the wrist-joint is a hard one with which to deal. By the method adopted by Dr. Taylor, there is a better opportunity of removing the diseased tissue.

DR. WILSON asked in regard to the kind of support that had been used.

DR. TAYLOR said that different kinds were tried, but, as a rule, the man did better without any appliance. He is now getting massage daily, and the stiffness is yielding. In the operation, he followed Dr. Keen's suggestion to remove a very large part of the metacarpal bone of the thumb. This was advantageous.

The Johns Hopkins Medical Society.

Baltimore, Md., Jan. 8, 1900.

COMMINUTED FRACTURE OF SKULL.

DR. H. W. CUSHING exhibited a son of one of the professors in the university, who had fallen three stories, lighting on his head and sustaining a comminuted fracture of the skull, the lines of fracture extending around the base but not involving the middle fossæ. Following the accident there were general convulsions and unconsciousness lasting three weeks. There was no facial, but there was oculomotor paralysis; the latter has not entirely passed away. During unconsciousness he was fed by food placed on the back of tongue. An incision was made across the vertex from ear to ear, as in making examination of the brain post-mortem, and the flaps of scalp lifted from the skull. Several fragments of bone were removed. The brain was extensively lacerated. The boy is now well and running around with perfect intelligence. Dr. C. has not been able to find any similar case in the literature, but referred to one in Dennis' Surgery, where a comminuted fracture of a negro's skull was caused by "butting."

SHOCK FROM OPERATIONS.

Dr. Cushing also spoke of the shock caused by severe surgical operations, which sometimes causes serious apprehension for the patient's life, and may even prove fatal. This shock can be prevented by cocainization of the nerve in the central side of the site of operation. The cocain shuts off all afferent impulses. The leg can be amputated by cocainizing the sciatic nerve. A case was there shown in which amputation of the arm, clavicle and breast had been done for a sarcoma of the upper humerus. The shock in this case had been most alarming, whereas in a second similar one with cocainization—a male also exhibited—there had been no shock.

GASSERIAN GANGLION AND TIC DOULOUREUX.

DR. CUSHING also exhibited a man in whom the Gasserian ganglion had been removed for tic douloureux, with a successful result and surprisingly little scar or deformity. He also quoted at length from the *Lancet* of 1828, to show that the philosopher Locke did practice medicine, and also his treatment of a similar case.

THROMBOSIS.

DR. T. B. FUTCHER detailed the histories of a number of cases of thrombosis that had occurred recently in the hospital. It is an interesting fact that, according to the statistics of Welch, the condition, taking all cases, is 50 times as frequent in the lower extremities as elsewhere: in cardiac disease, on the other hand, the vast majority occur in the upper extremities and neck, especially in the left upper extremity.

REMOVAL OF CALCULUS.

DR. H. A. KELLY exhibited a woman who had suffered from obscure renal symptoms, especially paroxysmal lumbar pains. The ureter was catheterized and the fine scratchings of the calculus obtained on the wax-tipped end of the catheter. An incision was then made through the left loin and a calculus removed. Although it was necessary to ascertain the presence or absence of other stones, there was but a trace of blood and the muscular edges of the little wound readily closed and were united by a few catgut sutures. The scratch marks were readily seen with a magnifying glass.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.
61 MARKET STREET, - CHICAGO.

SATURDAY, FEBRUARY 3, 1900.

MILKY ASCITES.

An accumulation of fluid in the peritoneal cavity may result from either local inflammatory conditions, or more exclusively vascular states. In the first instance, it occurs as an exudation; in the latter as a transudation. The second of these conditions may develop in consequence of venous blood stasis from whatever cause, general or local, or of undue permeability of the veins, such as is associated with nephritis, tuberculosis, carcinoma and other cachectic states. Exudates and transudates are usually clear, though the former are likely to contain flocculi of lymph, while their specific gravity is the higher—above 1014—and they contain the more albumin. The effusion may be bloody, and contain red corpuscles. Occasionally, ascitic fluid is whitish, like milk. This appearance may be due to the presence of either fat or chyle. The former has been observed in connection with tuberculosis or carcinoma of the peritoneum, when large numbers of fat-cells are thrown off and become admixed with and partly dissolved in the fluid present. Chylous ascites may result from rupture of lacteals or the thoracic duct, although it has been observed also in connection with carcinoma of the abdominal viscera.

In a case referred to by Osler[1], diphtheria bacilli were isolated from the fluid, and in one reported by Eshner[2], micro-organisms resembling colon bacilli were found.

A case reported by Poljakoff[3] differs from most of those on record in the failure of the fluid to yield to any of the reactions of fat. The patient was a woman, 48 years old, who presented general anasarca, and who denied and presented no evidence of syphilitic infection. The urine, passed in small amount, was dark red in color, with a specific gravity of 1033, and it contained a small amount of albumin, with hyaline and granular tube-casts. The abdominal effusion increasing, puncture was practiced, and nine quarts of a milky-white fluid were evacuated. The accumulation, however, reformed, the heart became weaker, and death ensued ten days later. On post-mortem examination the kidneys were found involved in parenchymatous inflammation. The liver was small and cirrhotic, and was the seat of a number of cicatrices, and of excessive lobulation. The spleen was scarcely enlarged. The peritoneal cavity contained milky-white fluid, and the peritoneum was sclerotic. The heart exhibited brown atrophy. The peritoneal fluid had a feebly alkaline reaction, and a specific gravity of 1009. The sediment formed on standing was found, on microscopic examination, to consist of well-preserved leucocytes. The presence of fat could not be demonstrated on either microscopic or microchemic examination. Chemical analysis disclosed the presence of serum-albumin and globulin, and an absence of peptone, hemi-albumose and sugar. According to Poljakoff, only three similar cases have been reported (Lion, Achard, Lainton). In these carcinomatous peritonitis was present. In all of the cases a creamy layer failed to form on the surface of the fluid on standing, while the fluid became clear on addition of glacial acetic acid and subsequent application of heat, but not when shaken with ether.

[1] Practice of Medicine, 1898, p. 607.
[2] Proc. Path. Soc. of Phila., N. S., Vol. ii, No. 9, p. 230.
[3] Berliner Klin. Woch., 1900, No. 1, p. 9.

PRACTICAL VALUE OF WIDAL'S REACTION.

Since Widal, in 1896, made "Pfeiffer's phenomenon" available for clinical use, a mass of observations has accumulated from which it ought to be possible to draw rather definite conclusions as to its diagnostic value. At the present time opinion seems to be divided on this point; some regard a positive reaction of decisive importance, others hold that the test is unreliable both in the positive as well as in the negative sense.

With Fischer[1], we hold that an investigator who proclaims his faith in Widal's method must show that his cases of supposed typhoid fever were actually typhoid: and yet the number of instances is decidedly small in which actual scientific proof, namely, the unquestioned demonstration of the bacillus of typhoid fever either during life or after death, has been furnished. Furthermore, the test must be made with the proper dilutions of the serum, and what is regarded as a positive reaction must be definitely stated. A large number of the reports fall short in either or both of these requirements. And those that regard Widal's reaction as unreliable must show, in the cases of positive result in other diseases than typhoid, that the typhoid infection was not present and that the patient did not pass through an attack of typhoid within a reasonable period; and in the cases of permanently negative results it must be clearly stated on what sort of evidence the diagnosis of typhoid fever is made. It is admitted that for therapeutic and prophylactic purposes the diagnosis may be satisfactorily made from a careful consideration of the sum total of clinical symptoms; but when it comes to the question of a scientific demonstration of the actual value of Widal's reaction, then the evidence of the presence or absence of typhoid, as the case may be, must be unimpeachable in all respects.

Observations of positive result with Widal's reaction without typhoid being present, and under circumstances that seem to exclude previous attacks of typhoid, have been published. Ferrand, Kasel and Mann and Fischer describe cases of febrile disease, evidently not typhoid, in which positive results were obtained once or twice with high dilutions of the serum, subsequent trials a few days later giving negative results. Experience does not teach that the presence in the serum of the specific

[1] Ztft. f. Hyg. u. Infectionskr. 1899, xxxii, 407.

paralyzing substances is as evanescent as shown by these reports. The importance of careful bacteriologic control of such cases is shown by the case reported by Gwyn; the case was quite characteristic, rose spots were present, but the Widal reaction was not obtained and cultures from the blood gave a para-colon bacillus.

On the other hand, Busch, Schumacher, and Fischer describe cases of undoubted typhoid, the diagnosis being clinched by the demonstration of the bacillus, in which the reaction could not be obtained on repeated trial.

Much of the material at hand is little suitable for an exact determination of the real value of Widal's reaction: 1, because cases have not often been controlled by bacteriologic examination; 2, because the serum has not been sufficiently diluted—it must not be stronger than one to twenty-five, Fischer; 3, because many have regarded mere agglutination as sufficient to be interpreted as positive, whereas complete paralysis of all bacilli is essential for this purpose. Nevertheless, there are as stated above, faultless observations on record, which show that Widal's reaction, though a frequent phenomenon in typhoid, only has the value of a symptom, and that it can not be regarded as a pathognomonic sign of decisive value in differential diagnosis.

RELATION BETWEEN HEART DISEASE AND EPILEPSY.

Although some observers have contended that a causal relation exists mutually between disease of the heart and epilepsy, this view has not received general acceptance. It is not impossible that the two diseases, when present together, should react unfavorably, the one on the other, but this is a different matter from the one giving rise to the other. While the pathology of epilepsy has yet to be cleared up, that hypothesis seems the more plausible that attributes the manifestations of the disease to irritation of the motor cells of the cerebral cortex, already unduly susceptible in consequence of either hereditary or acquired peculiarities. The irritant may be of most varied kinds, from the products of abnormal metabolism, or toxic substances introduced from without, through all gradations, to coarse organic lesions. With this conception it is difficult to understand how disease of the heart can be capable of causing epilepsy, except, perhaps, as a result of cerebral hemorrhage, embolism, or thrombosis; and it is even more difficult to see how epilepsy can at all cause disease of the heart, except, perhaps, in the form of acute dilatation, in consequence of the violence of the convulsions. That disease of the heart, by giving rise to cerebral anemia or hyperemia, might render more frequent the attacks in an epileptic can also be comprehended. That disease of the heart and epilepsy do mutually give rise to each other would seem to be indicated, among other facts, by the rather infrequent association of the two.

In a recent communication on this subject, Stintzing[1] reports two cases in which the association of epilepsy and heart disease was present, the patients being under observation for long periods of time—seven and five years respectively—and the clinical observation being controlled by post-mortem examination. The one occurred in a girl, 29 years old, without hereditary predisposition, who, in the sequence of a traumatism at the age of 18 years, was seized with epileptic attacks and symptoms of mitral stenosis. The symptoms grew progressively worse, and death occurred after the lapse of eleven years, in consequence of an acute infection. The second patient was a man, 37 years old, who had suffered from epilepsy of moderate severity for fifteen years, and who died as a result of alcoholic excess. He had previously had several attacks of rheumatism, and he presented the lesions of mitral insufficiency and stenosis, as well as the remains of antecedent inflammation of the pleura and the lungs. As a result of a study of these cases and of an analysis of the literature, Stintzing expresses the opinion that the simultaneous occurrence of epilepsy and disease of the heart is usually accidental and is most probably not dependent on the same primary organic disease. Epilepsy may give rise to transient dilatation of the heart, but not to any permanent cardiac disease. When the two diseases are present together, the cardiac disturbance is not the sole cause of the epilepsy, but other etiologic influences, such as the neuropathic predisposition, alcoholism, etc., are also operative. Heart disease and arteriosclerosis favor the occurrence of epileptic attacks in so far as they influence the circulatory conditions in the cortical centers. This is observed with particular frequency in old age, as manifested in senile epilepsy. In the simultaneous presence of epilepsy and heart disease, cardiac tonics, such as digitalis, often exert a favorable influence on the former condition. Serious disease of the heart may aggravate the course of epilepsy and at times give a peculiar impress to the attacks, as exhibited in a cardiac aura before and angina pectoris after.

[1] Deutsches Archiv f. Klin. Med., B. lxvi, p. 241.

PERSISTENCE OF LIVING, VIRULENT PEST BACILLI IN THE SPUTUM FOR WEEKS AFTER RECOVERY FROM PEST PNEUMONIA.

Gotschlich[1] reports three cases of pest pneumonia, which are remarkable, first because terminating in recovery, and second because virulent bacilli remained in the sputum for weeks after apparent recovery. The pneumonic form of pest is nearly always fatal. The significance of the observation lies in the fact that such cases undoubtedly constitute a most dangerous source of infection. The primarily pneumonic localization without bubo can not be diagnosed except by bacteriologic means. The frequency of instances like these and their actual influence in epidemics are for future investigations to determine.

[1] Ztft. f. Hyg. u. Infectionskr., 1899, xxxii, 402.

COLORADO AND QUACKERY.

The city of Denver has a lawsuit on its hands which has some features of medical interest. A man has sued for damages received from falling on a defective sidewalk, whereby he suffered fracture of his right arm and

three ribs. The defense is that his present damaged condition is due to treatment by an osteopath, and if the city wins its suit it may help to fix the status of osteopathy in the dominions of the great and good Governor Thomas, whose veto made Colorado more than ever the special dumping-ground for quacks. If the city loses, let us hope it will consider this fact.

GENERAL INFECTION WITH BACILLUS INFLUENZAE.

There are but few cases in which the bacillus of influenza has been demonstrated in the internal organs and in the blood. Of the twenty odd cases in which this has been done the brain is the organ in which the bacillus has been found most frequently. Slawyk[1] describes a case in a child, diagnosed as cerebrospinal meningitis, in whom the bacillus was present in the exudate obtained by lumbar puncture; later it was also found in the pus of an abscess about the external malleolus, in the blood, and post-mortem in an abscess on the back of the hand; histologically it was also found in sections of the lungs. The entire body of the child was invaded by influenza bacilli. The severest lesions were produced in the meninges, where thick, viscid, purulent exudate formed. Hence the clinical picture resembled that of epidemic meningitis. The point of entrance was probably the lungs.

PNEUMOCOCCUS ULCERATION OF THE STOMACH.

Dieulafoy[2] describes a rare but interesting form of pneumococcus infection, namely the gastric. Ulcerations of the stomach are occasionally seen in autopsies of cases of pneumonia, but Dieulafoy is the first to demonstrate that the pneumococcus is the actual cause of and present in such ulcerations of the human stomach. Bezançon and Griffon have shown that ulcerations may develop in the stomach of guinea-pigs experimentally infected with the pneumococcus. Of two patients with multiple serositis caused by the pneumococcus and presenting severe hematemesis during life, he found in one numerous small ulcers of the stomach reaching to the muscularis mucosæ, surrounded by an inflammatory zone; numerous pneumococci were present in the tissue of the floor and margins of the ulcers, and in the surrounding intertubular glandular tissue, even for some distance from the ulcers. In the second there were hemorrhagic extravasations in the mucosa, but pneumococci were not present. In how far such infectious ulcerations may be transformed into peptic ulcers remains to be seen.

THE BACTERIOLOGY OF OZENA.

Contrary to Loewenberg and to Abel, who regard a variety of Friedlander's bacillus—cocco-bacillus of ozena, bacillus mucosus—as the cause of ozena, Perez[3] finds that this annoying affection is caused by a special organism, which he designates as the cocco-bacillus fetidus ozenæ. The bacteriologic analysis of 63 cases—various form of rhinitis 32, ozena 22, normal nasal fossæ 9—forms the basis of the investigation of Perez. The organism of Loewenberg-Abel was found 17 times in the cases of ozena; 7 times in chronic rhinitis, and once in a perfectly normal nose. The cocco-bacillus fetidus ozenæ was found 7 times in 11 cases of fetid atrophic rhinitis, and once in 11 cases of atrophic rhinitis without fetor. The Loewenberg-Abel organism is regarded as the result of a secondary infection. The cocco-bacillus fetidus ozenæ is immotile, does not stain by Gram's method, is non-liquefying, non-fermenting in lactose, causes fermentation of urea, produces indol, and is pathogenic for guinea-pigs, mice, rabbits and pigeons. In nearly all cultures it produces the fetid odor peculiar to ozena. Experimentally it manifests a distinctly elective action on the nasal mucous membrane. Direct inoculation of the nose in the rabbit produces acute, subacute and chronic inflammations; in intravenous inoculations the principal result is hyperemia, hemorrhages and hypersecretion of the pituitary membrane, the organism being recovered from the mucus. The animals appear sick and miserable, become emaciated and anemic. Bacillus mucosus does not produce fetor and has no special elective action on the nasal mucous membrane. For these reasons cocco-bacillus fetidus ozenæ is regarded as the true cause of ozena.

[1] Ztft. f. Hyg. u. Infectionskr, 1899, xxxii, 443.
[2] Clinique médicale de l'Hôtel-Dieu de Paris, iii, 1898-99.
[3] Annales de l'Institut Pasteur, 1899, xiii, 937.

ALCOHOL AS A FOOD.

The temperance workers of the W. C. T. U. are somewhat agitated over the alleged statement of Professor Atwater, that alcohol is a food and that therefore the teachings of the physiologic text-books to the contrary are incorrect. The antitemperance people are correspondingly elated by his findings, and make the most of them. It seems to us that there is as little basis for alarm on the one hand as for elation on the other, especially when Professor Atwater has expressly said that he believed alcohol an excellent thing for healthy persons to let alone. The whole agitation depends on the signification of the word, "food." If it means anything that is oxidized and used up to any extent in the human body, it will include a very great many unwholesome and unpleasant substances besides alcohol. A man could support life on carrion, for example, and there are other substances that, while they are eminently oxidizable, are yet so disturbing to the general equilibrium of the organism that their ingestion is very unadvisable. The action of alcohol on the general metabolism may not be all included when we say it is consumed in the system and supplies heat and energy. It may be simply a case of very small gain at very large expense. There are many substances that are nutritious in a sense, but have a way of interfering with the important functions, sometimes vital ones, so as to be disastrous in their effects. There are many actively toxic substances that can be oxidized in the animal body and yield energy to a certain extent, and thus meet the technical definition of food. The food value of alcohol is insignificant at the best, and it is not taken for its nourishing but for its neurotic properties. If these latter are in any way inimical to human welfare, it is a very small matter that a couple of ounces be assimilated, and one that has no practical bearing on the temperance question. The school textbooks may require some slight alteration, but that is something that has to be done so frequently that it ought to give no concern. Neither the temperance advocates nor their opponents should lay such stress on such un-

important technical questions which really have no bearing on the main problems of the dangers and uses of alcohol.

PRACTICE AND DIPLOMA-MILLS.

The newspapers announce that one of the "doctors" who was refused a certificate by the Wisconsin Board of Medical Examiners has commenced suit against the members of the Board to compel them to issue him the coveted certificate. The "college" which gave the complainant a diploma is assisting in the prosecution, and he is likewise being backed by others who have a prievance against the Board and the principles it represents. The question arises: What are the physicians of Wisconsin doing to aid the Board in its fight? There is in Chicago a man who has been making money by running a diploma-mill, and selling diplomas. He has been at it for years, under one plan or another, and has found the occupation decidedly profitable, and an easy way of making a living. The present medical practice acts of Illinois having taken away this man's calling, he has organized a medical liberty (?) league, or something of the kind, for the purpose of fighting the Illinois State Board of Health and the medical laws of the state. United with him are those who oppose everything which tends to raise the standard of education in the medical profession. And again the question arises: What are the physicians of Illinois doing to assist the Board in the fight?

RELIGIO-MEDICAL QUACKERY.

The prophets of the various "healing" Zions of the day are keenly alive to the profits. Brigham Young died a millionaire, Mrs. Eddy is said to have acquired great wealth, and Dowie is investing heavily with the funds derived from the faithful. We have not found any of them, except perhaps "crazy Schlatter," without a very comfortable place to lay their heads, or at all inclined to sell all they have and give to the poor—the giving is the other way, it is the poor that give to them. We admire thrift, and have no special sympathies with the sentimental socialism of the day that holds the world is going to ruin because some people are rich, but we confess to a natural dislike to seeing fortunes acquired by such methods. In comparison with these self-sanctified money accumulators the worldly fraud who heals by "magnetic power" seems even respectable, and osteopathy almost scientific. The love of money, we are told, is the root of all evil, and we have evidence that it is certainly at the bottom of the religio-medical humbugs who are just now afflicting civilization.

EARLY NOTIFICATION OF MENTAL DISEASE.

Dr. Walter Channing, in a letter to the *Boston Herald*, makes the suggestion that there should be a compulsory notification of all cases of suspected or developed mental diseases. His letter is instigated by a recent case of murder and suicide by a well known professional baseball player, whose peculiarities had been noticed for some time by his associates, though no attempt had been made to guard against the event that was at least partially foreseen. There is much force in Dr. Channing's suggestion; a persecutory delusional paranoiac is a standing danger and many tragedies are the direct result of such patients being at large and unwatched. As the Doctor says, there is no necessary disgrace in being insane; it does not imply any essential moral defect, but it is a misfortune that should not be permitted to extend itself to others by the irresponsible acts of the victim. The notification and early treatment and watching of these patients would also be to their own advantage, and in case of some forms of derangement might lead to an early recovery, while without it the case might progress to a hopeless stage. If every physician who recognizes a possible case of dangerous insanity was compelled to report it to the proper authorities, and the latter would require that the subject be placed under proper control or committed to a public institution, we would have fewer dangerous and troublesome cranks at large, fewer tragedies to record, and would be spared an occasional judicial murder. There are, it is true, difficulties in the way, but they can be overcome and the law would have an excellent effect. One who, like Dr. Channing and other alienists, has given attention to this subject can realize the public and private dangers from the common neglect in these matters. The Doctor's suggestion is a sensible one that is worth considering by the authorities and the community.

GOVERNMENTAL EMPLOYMENT FOR DENTISTS.

The *Army and Navy Register* of January 27 is responsible for the following:

Need of Army Dentists.—A mail report received from General Otis states that the teeth of nearly every man in the islands are in bad stages of decay and recommends that a number of dentists be sent from the United States to look after the teeth. He states that after a careful investigation, he finds that a year of life in the tropics, living on army rations, has almost completely ruined nearly 50 per cent. of the teeth, while those of the remaining soldiers are in various bad stages of decay. The report was sent to Surgeon-General Sternberg, who wrote: "I am of the opinion that the appointment of competent dentists to the Army is an absolute necessity. I have long been of the opinion that there should be some systematic way by which the teeth of every enlisted man could be inspected at least once in a year, and preferably once in six months. There are few civilians who permit their teeth to be neglected for so long a period as six months. The condition of the teeth is reflected in the physical condition of the individual. If the teeth are bad, ache much, or do not perform their functions properly in the mastication of food, the health of the soldier is seriously impaired. I strongly indorse the proposition, and suggest that one dental surgeon, with the rank of major, be appointed for each regiment." A bill has been drawn up by the direction of the Secretary of War, which will undoubtedly be passed by Congress. The bill provides that the surgeon-general of the army, with the approval of the Secretary of War, shall employ and appoint dental surgeons to serve the officers and enlisted men in the regular and volunteer army, in the proportion of one dental surgeon to every 1000 men in the said army.

We have heard a great deal recently about the unsuitability of the army ration for troops in the tropics, but this is the first occasion on which reference has been made to the rapid decay of the teeth as a diseased condition prevalent in the tropics, for which the army ration is held in part responsible. We know that the teeth of every candidate for enlistment are carefully examined by medical men attached to the recruiting service, and that ordinarily the teeth of men of the military age are not subject to such wholesale and rapid decay as repre-

sented in the mail report said to have been received from General Otis. We were therefore so little impressed with the above statement of the ravages of dental caries among the troops in the Philippines that, had the paragraph ended here, we would have regarded it as one of those vague exaggerations which occasionally get into print through the medium of inexperienced reporters on the look out for something sensational. An air of indisputable fact is, however, given to the statement by the opinions and recommendations of Surgeon-General Sternberg, not as heard and reported by one liable to misapprehend, but as printed *verbatim* from the surgeon-general's own writing. This induced us to investigate, and we find that some mistake has been made which will probably call for explanation from the *Register* in its next issue. We learn that Surgeon-General Sternberg did not write the opinions and recommendations credited to him, and that he had yet to see the report reputed as having been sent by General Otis. We may therefore conclude that matters are not in such a desperate condition as represented in the paragraph, which possibly had its origin in the misapprehensions of some earnest but inaccurate promoter of a bill advocating governmental employment for dental surgeons.

FRAUD IN MEDICAL EXAMINATIONS.

So commonplace does bribery seem to have become in some communities, that level-headed men will be prepared for the charges of fraud that have been made in some states in connection with examinations for license to practice medicine. From time to time it has been reported that various devices to cheat have been employed in these examinations, such as prompting, the use of notes, and the like, on the part of individuals, and such expedients will no doubt continue in use until the whole world has been made perfect; but certain preliminary conditions are necessary in order that such wholesale and premeditated fraud may be connived at, as it is said was actually done at recent examinations before a state medical examining board. Having apparently learned from their representatives in municipal, state and national legislatures, and from other public officials, that the road to success and preferment must be paved with deception, bribery, ballot-stuffing, convention-packing, and broken promises, a number of applicants for the license to practise medicine conceived the brilliant thought that it would lighten the labors not only of the small number of examiners, but also of the larger body of applicants to be examined, if the questions to be put were placed in the hands of so many of the applicants as were willing to join in the enterprise, just a little before the time set for the examination. All that was necessary was to find some obliging person who, for a consideration, would secure the questions from a public-spirited, patriotic, and loyal state printer, with an eye single to the welfare of the commonwealth and the nation. The necessary arrangements were made, the price agreed on, and in due time notice was sent to those who had promised to make good the outlay, when it was found that copies of the questions could be obtained for a smaller expenditure. In this way trouble arose, and finally the secret came out. It has been stated, further, that not dissimilar methods have been employed in examinations in some medical schools for the doctorate, or in hospitals for resident physicianships, an obliging clerk either securing the questions in advance or substituting for the original paper of answers prepared in the examining room and handed in, a much more perfect paper prepared at the convenience of the student. There is not much to add. The remedy suggests itself. It might have been hoped, however, that even embryo medical men were less free from the vices of the times than other men, and in spite of revelations such as those cited, there is still good reason to believe that the hope is justified.

"ENDORSED BY PHYSICIANS."

When a patent medicine vendor desires to make a specially strong claim for his stuff, he adds to all its other advantages that it has the endorsement of physicians. If by hook or crook a man who can write "M.D." after his name can be cajoled or bribed to sign a testimonial in favor of a patent nostrum, that testimonial will be kept on duty until the paper fades and the ink has lost its blackness. There are various ways in which to get these endorsements, the most business-like being to buy them outright, provided it does not cost too much. But there is another and better scheme than this. It is to get the doctors to use the nostrum for a while; get them to prescribe and endorse it by writing it up in the medical journals and by talking about it in medical societies. To do this takes time, energy, and no small amount of tact in advertising. The nostrum vendor must give the doctors a present occasionally, such as a pocket-book with an imitation dollar in it; a case containing an assortment of the nostrum to carry in their vest pocket—so they won't forget it—etc., and then he must supply them with an attractive sign to hang on the office wall. This is an especially good thing to do if the sign is ornamental and suggestive. Of course, it must contain the name of the nostrum in plain letters so that all the patients can see it easily. A calendar is a good thing, as it will last for a year and yet will change every month. In this way the promoter of the nostrum keeps on the good side of the doctor and can then work him to work the people. It is a great scheme, because money can be made from the start. After the doctors have been used long enough to make the necessary impression on the people, the latter can be handled direct through the newspapers. This method has been used many times in the past, as it is being used now, and will be so long as physicians are such willing tools. These agreeable reflections are called forth through the kindness of a friend who has sent us a clipping from a newspaper called *The Mirror*. The article is entitled "Mr. Ingalls and Women," although it is difficult to understand just what Ex-Senator Ingalls has to do with the subject, unless it be that he, like the doctors, is used as a tool with which to pull the chestnuts out of the fire. Here is the "meat" of the article, which of course is a paid advertisement, without further comment:

> Maybe, as a rule, women headache and backache and legache more than men, but I declare to goodness! I never heard of one bellyaching more than the men. And so, not altogether cheerfully, I must yet admit that, in a thousand ways, women are more open to attack than men. Against a host of pains, Nature gave them less armor, while man's civilization increases their need of it. But I thank the Lord, that, even as civiliza-

tion has increased our pains, lo! many times and manifold, so hath Science given us relief from our suffering. For, perhaps the greatest boon to our race (the blessings of which, men equally share) comes to us under a name of two Greek words, "Anti" and "Kamnos," which, Anglicized as Antikamnia, mean *"opposed to pain."* This has been the sheet anchor of joy in a million homes where pain would dwell. It has harmlessly relieved the untold sufferings of countless mothers and daughters. In opposing and dispelling our pains, it is most democratic (which is not a characteristic of Mr. Ingalls). It cares not whether the cause be a "cold," la grippe, rheumatism or neuralgia—whether it be toothache or stomachache, headache or "that pain in the side"—making no difference whether our sufferings be due to man's inhumanity to woman or Nature's regular periods of distress. It discriminates not in favor of the rich or powerful, neither does it depress the overburdened heart—duchess or nurse, bookkeeper or bluestocking, servant or society queen, it's all the same to Antikamnia Tablets—they relieve them all and plant on the pinched face of pain the roses of health and joy.

And right here let me say, parenthetically, for the benefit of my sex (and before I proceed further to demolish Senator John James Ingalls of Kansas), that Antikamnia is put up in the form of five-grain tablets and that the usual dose for adults is from one to two tablets every two to four hours, according to the need. My doctor tells me that physicians prescribe them all over the world, because, unlike opium, narcotics and so many other drugs—gracious me, I can't remember half their names!—Antikamnia Tablets never produce habit, never incapacitate, are always prompt and efficient, have no balloon characteristics, lifting one up among the clouds in "iridescent dreams" only to drop one in the slough of despond. They just relieve the suffering, drive away the pain and leave the nerves as steady as you please, mind you, and Oh! so rested!

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Medical News.

THE COUNTY hospital at Colorado Springs, Colo., was destroyed by fire January 20. The loss is estimated at $8000.

THE HEALTH Board of Pine Bluff, Ark., has requested the mayor to issue a proclamation making vaccination compulsory on the part of all citizens.

AT A meeting of the city council of Huntsville, Ala., an ordinance was passed requiring the vaccination of all children attending the public schools.

DR. YVES KERRIEN, superintendent of the insane asylum at Vanvres-Malakoff, with four attendants, is on trial in a Paris court, for cruelty to inmates. Dr. Socquet, sent to investigate, testified to finding many traces of violence on the bodies of the patients.

THE GERMAN lay press has translated President Keen's editorial on the Gallinger bill, from THE JOURNAL of Dec. 23, 1899. The *Kolnische Zeitung* of January 11 publishes it in full, under the heading: "A Call to Arms Against Antivivisectionists," with a few words of explanation and approbation.

THE PARIS dailies mention that the physicians who have been gratuitously devoting their time, for years, to two large dispensaries for children in Paris, connected with the *Ecoles de Terne,* recently resigned *en masse* in consequence of an order from the officers of the society that they must henceforth refuse to treat children who are attending the "free schools."

THE QUESTION of the admission of medical women to membership in the Berlin Medical Society has been finally decided. The resolution, supported by Virchow and others, and adopted by an overwhelming majority, provided that any physician *approbirte* for the German Empire is eligible to membership. This opens the doors to women whenever they succeed in obtaining the official sanction of the German Empire, and not until then.

WE HAVE mentioned the utilization of carrier pigeons by physicians to obtain prompt news of their patients and a summons when needed, but a French confrère, Dr. Kaplan of Janville, Eure-et-Loir, has surpassed them by training pigeons to take back replies to the patients. The *Gazette Méd. de Paris* of January 13 illustrated the "medical pigeon house" and promises, soon, a full description of the methods of training pigeons to accomplish what it calls "these truly elegant and even marvelous results."

A BILL now pending in the Ohio legislature provides for the examination of all desiring to practice medicine in the state. It establishes an examining board which would be simply a continuation of the present board of registration vested with additional powers. The Board will refuse to accept diplomas as qualifications, and if the applicant fails to pass the examination he can not practice. The law has been asked for by a joint committee representing all the schools of medicine in the state.

A POSSIBLE danger of the public bath is illustrated in the report of a number of cases of conjunctivitis of varying degrees of severity, occurring among those known to have frequented a given bathhouse in Berlin. With a reasonable degree of cleanliness, and the observance of ordinary precautions, such an unpleasant occurrence should be avoidable, but the fact that it has been observed should be sufficient, not only to awaken those concerned in the management of such admirable institutions to its possibility, but also to suggest the measures necessary for its prevention.

PRACTICE ON DIPLOMA-MILL DEGREES.—The Michigan Board of Medical Registration has, on the opinion of the attorney-general, decided to throw out diplomas from diploma-mills that sell their degrees without requiring residence or study. This disqualifies a large number of the dupes of Armstrong, Bland & Co. These have flocked into Michigan of late years, and probably not all of them have yet come before the Board, but this decision will settle their status. It is a pity that some neighboring states do not have the Michigan law against diploma-mills; as it is, she has to protect herself against their products. The same question is at present before the Wisconsin Board, and is likely to require settlement by the courts. It is to be hoped that the law in both states will be found sufficiently iron-clad to resist the attacks that are likely to be made against its execution.

SMALLPOX PREVALENT.—The official reports to the U. S. Marine-Hospital Service, Dec. 29, 1899, to Jan. 26, 1900, show the general prevalence of smallpox throughout the country. The greater number of cases are reported from the Southern States. The following is a brief summary of reported cases: Georgia—Brunswick, 10; Blackshear, 16; Waycross, 7; Louisiana—Lafayette, 130; East Feliciana, 50; Shreveport, 51; New Orleans, 32; North Carolina—Halifax County, 50; Guilford County, 23; Rowan County, 16; Ohio—Cincinnati, 5; Cleveland, 48; Oklahoma Territory, 54; Tennessee—Memphis, 132; Columbia, 24; Nashville, 8; Mount Pleasant, 8; Texas—Austin, 10; Houston, 5; Index, 30; balance throughout the state, 31. Press dispatches state that the disease is rapidly increasing in Indiana, and has made its appearance in twenty counties. The chief difficulty lies in the fact that many physicians dispute the diagnosis. Dr. J. N. Hurty, secretary of the

State Board of Health, has issued an order requiring local boards to enforce the rules of the State Board without question. In event of failure to comply with its orders the secretary is empowered to institute legal proceedings against the refractory officials. Twenty cases are unofficially reported from Vicksburg, Miss.

NEW YORK.

New York City.

DR. J. RIDDLE GOFFE has been elected chairman, and Dr. George G. Ward, secretary, of the Section on Obstetrics and Gynecology of the New York Academy of Medicine.

WHILE A woman was engaged in spraying the throat of her child, aged nearly 3 years, suffering from diphtheria, the nozzle of the spray apparatus became loosened and lodged in the child's throat. The boy choked to death before a physician could reach him.

THE WIDOW of a wealthy brewer has made a number of charitable bequests: $2000 for the Home for Incurables, $3000 for the German Hospital, $1000 for the founding of a training-school in connection with this hospital, and $1000 each to St. Joseph's Home for Consumptives and the Lebanon Hospital.

AT THE twentieth annual dinner of the New York alumni of Cornell University, held January 26, the president of the University made announcement of an anonymous gift to Cornell of $80,000, for a building to be erected at Ithaca, for the study of anatomy and physiology. The toast, "Cornell in Greater New York," was responded to by Dr. Wm. M. Polk, dean of the Cornell Medical School in New York City.

CASE OF SMALLPOX.

A laborer who had been employed in North Carolina on a railroad, came to New York on the Old Dominion Line and, two days later, walked into Bellevue Hospital complaining of feeling sick. The physicians who saw him, it is said, told him that the proper hospital for him was the Metropolitan, but he could not be sent there until the following day. Not recognizing the true nature of his disease, they allowed him to leave the institution. The day was spent in riding about in street-cars, and at night he sought shelter in the City Lodging House. A few hours later he was so ill that he was sent to Bellevue Hospital, and then the correct diagnosis of smallpox was made. The man was promptly isolated, and the Board of Health notified. The lodging house was thoroughly disinfected, and the ninety-five lodgers were vaccinated.

PENNSYLVANIA.

THE ANNEX to the St. Joseph's Hospital, Lancaster, was opened January 26. The hospital is under the Order of the Sisters of St. Francis.

THE AUTHORITIES are still after offenders against the oleomargarin law. On January 20, seven grocers were arrested at Chester and given a hearing. All have been held in $300 bail.

AT THE Pennsylvania Epileptic Hospital and Colony Farm, in Chester County, forty epilepties are being cared for, while twice that number have been treated during the past year. Many applicants are rejected on account of lack of facilities.

Philadelphia.

THE CITY Board of Health is perfecting arrangements in regard to ventilation of street-cars.

TO DATE $1700 has been subscribed to the fund for the benefit of the widows and families of British soldiers who have lost their lives in the South African War.

DR. J. MADISON TAYLOR has sent out notices calling attention to the need for a pay hospital for contagious diseases in this city such as exist in Boston, New York, and other cities.

OPIUM SMOKING.

A YOUNG woman teacher of the Chinese became addicted to the smoking of opium, which it is believed she learned from her pupils. Having gone to an opium den and smoked, she developed alarming symptoms before medical aid was obtained, and death occurred shortly afterward. Smoking of opium appears to be by no means uncommon, not only among the Chinese but among others. Opium is consigned to Chinese merchants, and by them sold to the habitués, while, it is charged, policemen have been most negligent.

THE REPORT of the Philadelphia Society for Organizing Charity, for the past year, shows that fewer applications were made to the Society than during any of the previous five years. There were 22,077 applications for aid. Among these, 1243 non-residents of the city were cared for, of whom 345 were furnished with transportation. Notwithstanding that the state appropriation of $2500, asked for, was not made, the receipts amounted to $30,580.34, and at the end of the year $91.87 remained on hand.

THE COMMITTEE on Hygiene, of the Board of Education, proposes to give more attention to the subject of hygiene in the public schools, by proper instructions to janitors, on whom rests more responsibility than has been accredited them.

UNIVERSITY OF PENNYSLVANIA MEDICAL SOCIETY.

This society was organized January 26, for the promotion of medical and allied sciences, particularly among those officially connected with the University. It is hoped to enlist the active co-operation of all attached to the medical, biological, dental, and veterinary departments, the University Hospital, the Veterinary Hospital, the Laboratory of Hygiene, and the Wistar Institute of Anatomy and Biology. The following officers were elected: president, Dr. A. C. Abbott; vice-presidents, Drs. Milton B. Hartzell and Leonard Pearson; and secretary, Dr. A. O. J. Kelly.

OHIO.

THE SCHOOLS at North Amherst have been closed on account of an epidemic of scarlet fever and diphtheria. Twenty cases have been reported.

THE TRUSTEES of the Massillon State Hospital have asked the legislature for an appropriation of $170,000 for improvement of the institution. Of this sum $55,000 is desired for the construction of an assembly hall and the remainder for additional cottages and an infirmary.

Cincinnati.

A NEW chemical machine for disinfecting alleys and gutters has been tried by the Health Department, with marked success.

DR. C. C. AGIN, who has just recovered from an attack of appendicitis, has left for Cuba, to recuperate, in company with Dr. W. D. Haines.

SUIT AGAINST DRUGGIST.

A RATHER novel suit for damages was filed January 23, against a druggist. The defendant says that in December, 1898, she was suffering from extreme nervousness and sent her husband to the drug store for a medicine that would relieve or cure her. The druggist recommended and sold to her husband a proprietary medicine, and prescribed, as a dose for her, a teaspoonful three times a day until she was relieved or cured. She says that she took the medicine as directed until Feb. 15, 1899, when she became paralyzed and unconscious. She claims that she was seriously ill for ten weeks, and unable to attend to her work for six months, and that as a result her general health has been greatly impaired. She wants $5300 as damages either for the prescribing of the wrong or too much of the right medicine.

Columbus.

BOARDS OF HEALTH.

The tenth annual meeting of the state and local boards of health was held in this city January 25 and 26. Dr. Frank W. Hendley, of Cincinnati, a member of the state legislature, explained a bill which has just been introduced by him in the House, providing for the immediate disinfection of any school room in which, during a period of thirty days, five cases of any infectious disease have been present. He also spoke of another bill which he is preparing, providing for a state hospital for cattle infected with tuberculosis, and asking for suggestions on this point. Drs. Tenny, Probst, and Deuschle were appointed a committee to confer with Representative Hendley regarding his bill for disinfecting school rooms. Dr. Probst, secretary of the State Board of Health, recommended that the legislature be urged to enact laws corresponding to the standing orders and regulations of the boards of health. A motion was introduced to oppose the appointment of a commission by the Government appointing health officers in cities of over 3000 inhabitants, but, after considerable discussion, a new motion was offered and adopted to let the present mode of appointment remain as it is, and another in favor of appointing county health officers. Dr. W. A. R. Tenney, of Cincinnati, read the outline of a

bill providing for the sterilization of barbers' tools, which he asked to have referred to the same committee that was to confer with Dr. Hendley. The Nominating Committee reported the following nominations, which are equivalent to election: president, W. S. Hay, Weelston; vice-president, Mrs. Mary E. Moore, of Youngstown, and H. S. Prophet, of Lima; secretary, H. H. Cassel, Portsmouth.

ILLINOIS.

THE ANNUAL report of the Aurora City Hospital shows that 214 patients were treated in the institution during the past year.

THE QUARTERLY report of the State Board of Charities shows that the total number of inmates of state institutions at the end of the quarter was 10,197. The average cost per capita for their support was $39.06.

Chicago.

DR. CHRISTIAN FENGER has left the city on a vacation. He will return March 1.

DR. NICHOLAS SENN has returned from his hunting trip in Texas.

THE MEDICAL inspectors of schools examined 7376 pupils during the week, of which number 452 were excluded.

DRS. W. T. MONTGOMERY and D. W. Graham sailed for Europe January 30. They will spend six months and visit the principal Mediterranean ports.

THE WILL of the late Dr. Albert E. Hoadley, filed for probate January 26, disposes of an estate valued at $50,000.

MORTALITY STATISTICS.

The total mortality for the past week was 486, a reduction of 55 as compared with the week preceding. The reduction was chiefly in the chronic diseases and among the aged. There was a slight decrease of mortality from scarlet fever and diphtheria. The rate for typhoid fever also shows a decline.

DEATH UNDER "CHRISTIAN SCIENCE."

Another victim was added to the "Christian Science" mortality, January 26. An 8-year-old child was placed under the care of a "healer" who diagnosed the case as "bronchial croup" and applied the usual methods of prayer. During the course of treatment, which extended over two weeks, it was observed that respiration was greatly impaired and that there was some obstruction in the throat, but an examination was not considered necessary by the "healer." When the child finally succumbed, he is said to have stated that the immediate cause of death was "heart disease." The coroner's physician found that the child died of "strangulation, caused by the breaking of an abscess in the throat." It is not known whether legal proceedings will be instituted against the "healer."

PHYSICIANS' CLUB.

A regular meeting of the Physicians' Club was held January 29, with the following program: "Constitutional Aspects of Medical Legislation," Hon. S. P. Shope; "Analysis of the Present Medical Law, Its Strength and Weakness," J. W. Pettit; "Need of Organization to Promote Proper Medical Legislation," George H. Simmons; "Practical Difficulties in the Way of Passing Medical Practice Acts," J. A. Egan. Remarks were made by Drs. I. N. Love, of St. Louis, C. W. Hawley, Frances Dickinson and H. N. Moyer. A resolution was passed recommending George W. Webster for the first vacancy occurring in the State Board of Health.

MARYLAND.

REGULATION OF PRACTICE.

A committee of the Medical and Chirurgical Faculty, consisting of Drs. Samuel T. Earle, Jr., C. Hampson Jones, William Osler, William F. Lockwood, and Thomas A. Ashley of Baltimore, and J. McPherson Scott of Hagerstown, have framed a new law, changing and strengthening the existing legislation relating to the practice of medicine in Maryland. The committee visited Annapolis on the 25th ult., to bring the proposed measure before the legislature. The first law for the regulation of the practice of medicine in Maryland was that of 1799—the charter law of the Medical and Chirurgical Faculty. In 1839 the legislature changed this, and in 1892 the present law restored to the Society its lost powers in regulating practice; the 1892 law was amended in 1894 and in 1896.

Baltimore.

DR. JESSE W. LAZEAR, assistant in clinical microscopy, Johns Hopkins Medical School, recently appointed assistant-surgeon U. S. A., left for Havana, February 1. He will there be connected with the newly-equipped laboratory.

DR. THOMAS WOOD HASTINGS, formerly assistant resident physician of Johns Hopkins Hospital, has charge of the nurses and medical outfit in the American hospital-ship *Maine*, in the English service in South Africa.

DR. H. A. KELLY, while exhibiting some snakes at the meeting of the Johns Hopkins Medical Society, January 22, was bitten by a diamond-backed rattlesnake, on the end of a finger. Jerking his hand away quickly, he merely sucked the finger, and proceeded with his demonstration. No ill-results ensued, as he drew away his hand so quickly that the snake had not time to inject its venom into the wound after it had struck.

"ST. AGNES SANATORIUM."

St. Agnes Hospital, which is under the charge of the Sisters of Charity (R.C.), will be changed from a general hospital to one for treatment of nervous diseases exclusively. No insane will be admitted. Dr. George J. Preston has been made medical director. This is the first institution of the kind in the state, and there has been a growing need for it for many years. The late Dr. John P. VanVibber was on the point of establishing one, having had a successful dispensary in operation for some years, when his health broke down, followed by his untimely death. The institution has seventy acres of ground, part woodland, with greenhouses, flower and gruit gardens and grassy lawns, and over 125 private rooms, with two free wards supported by the city appropriations. A hydrotherapeutic establishment costing $40,000 was recently added.

DISTRICT OF COLUMBIA.

HEALTH OF THE DISTRICT.

The report of the health officer for the week ended January 20 shows the total number of deaths to be 106, of which number 64 were white and 42 colored. There were 2 fatal cases of diphtheria, 1 of scarlet fever, and 1 of typhoid fever. At the close of the week there were 67 cases of diphtheria, over 100 of scarlet fever, and 3 of smallpox under treatment.

Washington.

THE SUM of $5000 has been added to the urgent deficiency bill for the completion of the isolated wards of Providence Hospital.

THE FOLLOWING physicians have been appointed by the Board of Trade on the Committee of Public Health: Dr. W. W. Johnston, Surgeon-General George M. Sternberg, Drs. H. L. E. Johnson, W. P. C. Hazen, L. W. Richie, J. E. Jones, G. H. Henderson, C. W. Richardson, I. S. Stone, H. H. Barker, J. W. Bovée, D. P. Hickling, F. T. Chamberlain, W. C. Woodward, and C. R. Dufour.

AS A result of the competitive examination recently held, Dr. Ferdinand Walsh was appointed assistant resident physician, Dr. W. C. Williams was promoted to be resident, and Dr. Charles G. Smith was made assistant resident, at the Central Dispensary and Emergency Hospital. Dr. W. E. Whitson has completed his service as resident physician and retires to enter private practice.

DENTISTS FOR THE ARMY.

The bill recently introduced in Congress authorizing the appointment of dental surgeons with the rank of major for each regiment is strongly opposed by Adjutant-General Corbin and Suregon-General Sternberg. While the latter advocates the appointment of dental surgeons for the army, where required in the interest of the soldiers, he does not approve of their being commissioned officers with the rank of major. He calls attention to the fact that regular surgeons in the army have to serve about twenty years, and sometimes longer, before they reach the rank of major, and he does not think it would be fair to admit dental surgeons in the army with the rank at the outset. He favors the employment of contract dental surgeons.

LOUISIANA.

New Orleans.

THE CIVIL district court has refused to grant the mandamus asked for by the City Board of Health (see THE JOURNAL, January 27, p. 244) to compel the city council to increase its appropriation for the current year.

SMALLPOX, which has been quite prevalent for some time, numbers among its victims two members of the graduating class of the medical department of Tulane University. Twelve others are being cared for in the museum, which has been turned into a comfortable ward for them.

AT A meeting of the Board of Control of the leper hospital, January 22, it was announced that the appropriation of $20,000 for a permanent leper home was available. A commission will be immediately appointed to select a site.

NEBRASKA.

STATE MEDICAL LEAGUE.

The annual meeting of the Nebraska State Medical League was held in Lincoln, January 24. The work of the League during the past year was discussed and future plans were formulated. This organization was formed last year, for the purpose of uniting the profession in the state for furtherance of medical legislation, enforcement of medical law, and raising the standard of medical education. The League is made up of registered physicians of all schools. A vast amount of work has been done, and the League is steadily gaining in membership. The next meeting will be held in connection with the meeting of the State Medical Society, in June.

CANADA.

DR. SINCLAIR, Paris, Ont., has been appointed chief physician to the Blind Institute, Brantford, in place of Dr. Marquis, recently deceased.

DR. COTTON has given notice of a bill in the Quebec legislature, now in session, concerning the medical profession in that province. It is understood to apply to the election of officers of the College of Physicians and Surgeons. Proxies are to be abolished, and practitioners will hereafter vote in their own districts, instead of in Montreal.

OVER-CROWDING IN ONTARIO ASYLUMS.

It is stated that the number of inmates of the various asylums in this province is increasing, at present there being over 4500 lunatics undergoing treatment. Include those feeble-minded people at the Orillia Asylum and the number will reach 5200, an increase of over 100 during the past year. During the last ten years there has been an annual increase of something like 88.8, and, as a consequence, all the provincial asylums are full, and in many places these unfortunates are housed and cared for in the common jails. Although there is an annual increase of the insane population, the per capita ratio of lunatics of the population remains practically the same. The provincial legislature is about to assemble, and provision must be made to accommodate the increasing number of those who require treatment in our asylums. At present there are practically no vacancies in any of them, and the lunatics confined in jails on Dec. 31, 1899, numbered 89. It is very probable that the government will ask, at the coming session, for a large appropriation to turn the old Victoria College at Cobourg into an asylum for epileptics and very mild cases of lunacy. To meet the increase, alterations are proceeding in several of the asylums. There are at present over 700 inmates in the Toronto Asylum, as compared with 643 in 1898. The new asylum in Brockville is already filled, with 600 patients.

COUNTY MEDICAL HEALTH OFFICERS FOR ONTARIO.

That the above is likely soon to become a question of practical politics in Ontario may be gathered from the interest the provincial lay press is devoting to the subject. Lately there has been a rather extensive outbreak of smallpox in North Essex; and the county paper of that district says that had there been a competent county medical officer with power to act promptly, much could have been accomplished in the way of prevention of the spread of the disease. At present physicians are appointed by the municipalities in the respective counties, whereas, if each county had a properly constituted officer, devoting his whole time and attention to the work in hand, it would be done thoroughly and fearlessly, without any dread of offending certain individuals and corporations. It is stated that in the recent outbreak of smallpox in Essex, the ordinary physicians had no desire to look after those afflicted with the disease, and in all probability it was due in a large measure to this diffidence that something like 250 cases of the disease occurred in that county. For some time the secretary of the Provincial Board of Health, Dr. Bryce, has advocated the appointment of these county officials, and as the matter was up for discussion at the last session of the legislature, it is altogether probable that a fuller and freer consideration of the whole subject will be gone into on the part of the representatives of the people.

BIG DECREASE IN ONTARIO'S BIRTH-RATE.

Dr. Bryce, the deputy registrar-general of Ontario, has prepared the following statement, based on figures now being prepared for the report of the registrar-general: Over a period of ten years, in an urban population estimated (1891) at 407,058, and during which the yearly census has shown an increase of 25.6 per cent., there has been an absolute decrease of births in the thirteen chief cities of Ontario, from 10,819 in 1889 to 9111 in 1898, or a difference of 1708. These cities are: Toronto, Hamilton, Ottawa, London, Kingston, Brantford, St. Thomas, Guelph, St. Catherines, Belleville, Stratford, Windsor, and Chatham. Had the rate of increase of registration from 1889 to 1898 been the same as that in the population for the same period, there would have been registered, in 1898, 12,709 births instead of 10,819. Toronto is cited as an illustration of the defective system of registration. During the ten years there has been no change in the incumbency of the office of registrar: and the population has increased by 47,065, though the births show an absolute decrease of 824: or there were 20 per cent. more births registered in 1889 than in 1898. If, however, the population, according to the municipal returns, be taken into the calculation, viz.: an increase from 139,452 in 1889 to 186,517 in 1898, then had the rate in 1889 been maintained, there would have been 6,615 births registered in 1898. In other words, a relative decrease of 64 per cent. has occurred in the birth-rate of Toronto during the last ten years. This then is the state of affairs only three years after the provincial legislature passed the act of 1896 which provides that division registrars shall use all available means to obtain the necessary information in regard to such births, and shall receive 20 cents for each return, to be paid by the municipality, and that the parent, nurse, midwife, or physician in attendance should give notice thereof to the division registrar within thirty days from such birth. It seems obvious that some other machinery than that at present employed in cities is absolutely necessary if complete returns are to be expected.

CHARLOTTETOWN HOSPITAL.

The report of this hospital, for 1899, shows that 185 patients were received during the year. Of this number 100 were paying patients. Besides these there were 46 outside patients, to whom medicine was dispensed gratis during the year. There were 60 surgical operations and 4 deaths; 13 remained in the hospital at the end of the year. This hospital is the largest in P. E. I.

DR. W. G. NICHOL, Montreal, has been appointed supervising medical examiner for the Royal Arcanum in the Province of Quebec.

IT HAS been proposed that the medical societies appoint a bacteriologist, who may be employed by the milk dealers to make bacteriologic examinations of milk.

DR. W. W. CHIPMAN, of Edinburgh, has been appointed assistant gynecologist to the Royal Victoria Hospital. He is at present assistant to Professor Simpson and to Dr. Barbour.

M'GILL MEDICAL SCHOOL.

Friends of this institution are especially grateful for the recent gift of $100,000 to be devoted to building new laboratories for the departments of chemistry, anatomy, pathology, and physiology. The registration in this school for the current year is 451, the entering class numbering 132. A number of McGill graduates are serving the government in the Transvaal. A new course has been opened, that in hygiene and public health, under the special supervision of Prof. Wyatt Johnson. At present no university on this continent is giving such a course, the one started some years ago by the University of Pennsylvania having been giving up for lack of attendance. The number taking the course this year is limited to members of the medical faculty, who will help in the organization of the work. Next year the course will be presented especially for post-graduates who are interested in the work of health boards, public medicine, etc.

Correspondence.

The Elimination of Tuberculosis Out in the "Open."

DENVER, COLO., Jan. 27, 1900.

To the Editor:—"A hint to the wise" comes from the cattle ranges of the West. It is embodied in an address by Dr. Charles Gresswell, former state veterinarian of Colorado, which address was delivered at the recent National Live Stock Convention held at Fort Worth, Texas. It was on the subject of "Tuberculosis from the Range Standpoint." The author is one whose conclusive opinions should be highly valued by every reader of THE JOURNAL. His father, two brothers and himself were all well known in the fields of veterinary surgery and comparative pathology in England In Colorado, Dr Gresswell has distinguished himself for his clear insight in quarantine matters and the contagious diseases among animals.

I was cognizant of the instance of the twenty head of Shorthorn tuberculous cattle, he refers to. I went with him to see the last of them. Except for the enlarged glands under the jaws, those animals did not look so bad, yet one of them, a cow, gave a temperature of 109° F., after the tuberculin hypodermic. But by closer observation, râles, rhonchi and broncho-vesicular breathing could be heard in the chest. Most of the bulls of this family had been sent out on the range. I knew of some of their earlier progeny, from over in the Bear River country, that were fine fellows, the steers of three years selling as four-year-olds.

As we were leaving that farm, which was between Denver and the mountains, I remember Dr. Gresswell saying: "Wouldn't it be remarkable if the owner—himself coming to Colorado a consumptive—had, by expectorating on the grass or hay, infected his own herd, while he himself has apparently recovered from the disease?" The Doctor believed, however, that the continued in-breeding and the close confinement of this herd had resulted in their complete infection, as will better appear from his paper. It should be noted that the original stock, over-bred before leaving the British Isles, had never been reinforced by new blood in America.

This excellent lesson and plan of cure is commended to the careful consideration of those Eastern physicians who are possessed with the latest fad, the home treatment of consumption in sanatoria, near or in the cities where they respectively reside. If those philanthropic gentlemen would spread out their consumptives—the curable ones—over the elevated Western plains, as Gresswell would his tuberculous cattle, they would not need such "closed" institutions, and artificial methods. Dr. Gresswell says, in part:

I will start with the bold assertion that terrible as the disease is in its effects on both animals and mankind, yet to the range cattle industry proper it has no danger whatever, and neither does the range industry need any protective quarantine against it, nor would any quarantine measures be practicable, even if they might be considered necessary by some alarmists.

This assertion is a cold one and especially coming from me, probably one of the first over twenty years ago to draw attention to the widespread existence of tuberculosis in the high-bred beef and dairy herds of Great Britain, and to the danger which existed from the communicability of this disease to mankind, and the necessity of severe measures toward its suppression.

Since that time the intercommunicability of the disease between man and the lower animals, and the identity of the disease, whether found in man, cattle, hogs or poultry, have been fully established beyond question of doubt. It has further been demonstrated that the direct cause of the disease is the presence in the blood and tissues of a micro-organism—the bacillus of tuberculosis—and that this organism is common to all forms of the disease in whatever animal it is found, and that the successful transmission of the disease from one to another depends only on the condition of the recipient.

It is, therefore, I repeat, a bold statement to make, that the disease, contagious as it is known to be, and so terrible in its effects when once it is established, has no terror for the range cattle owner, and that he needs no state or federal protection from its ravages.

Although the direct cause of tuberculosis is the admission into the system of the specific germ, yet its pernicious action depends so much on the manner in which it gains access to the victim, and the condition of the recipient, that it may be said that conditions form a more potent factor in the ultimate causation of the disease than the germ itself. So common is the disease in civilized life that were it equal in potency for evil to that of rinderpest, or pleuro-pneumonia of cattle, or to the germ of smallpox or scarlet fever of man, not a hoof of cattle or a living man would be free from infection twelve months from date. When it is realized how common the germ is, and how intercommunicable between different species of animals, and how insidious it is so frequently in its action, it will be evident how hopeless it is to expect to do much toward limiting exposure by quarantines, and how much rather it is necessary to base preventive measures against those conditions under which the germ becomes effective.

The disease is seen with great intensity equally in the highest grades of cattle, as in the retrograde monkeys of a traveling menagerie; in the degenerate Indian, as in the inbred highest social families of the Old World. Wherever the conditions of life are unnatural, from inbreeding, intense breeding, excessive development of one set of organs of the body over those of another—as exemplified in the highest grades of dairy cows—and wherever these conditions are associated with overcrowding, or a generally unhealthy method of living, the germ of tuberculosis finds a hotbed for its certain fructification.

On the other hand, where growth is more uniform, and the condition of life more in accordance with natural customs of the animal, it is difficult for the germ to cause the slightest disturbance. In a word, in some cases the germ is exceedingly contagious, whereas in others, it is very feebly infectious even if at all.

Extremely susceptible subjects to tuberculosis are also produced in the artificial management, commercially necessary in the economical production of dairy products, yet we can not afford to revert to the more natural dairy cow of years ago. Now, all the favorable conditions for the fructification of the tuberculosis germ are absent on the range, and so adverse are range conditions to the disease that it may practically be considered non-contagious thereon. It is extremely doubtful if any active subject of the disease could communicate it to other animals under range conditions; and even if it were communicated in an isolated case through a peculiar combination of favorable causes, it could not spread. The acute cases would either rapidly die from exposure or get sufficiently well to be free from infective qualities. Susceptible subjects to tuberculosis will not live on the range, and the germ itself, when free from an infected animal, will not survive long enough in potent form to damage other animals liable to come in contact with it. The two main elements of the contagion are wanting—the proper receptivity of the animal and the potency of the germ.

Some years ago I followed the history of a herd of some twenty head of Shorthorns, all more or less tuberculous, which were thrown on the open range. Three of the advanced cases died in a short time. The rest gradually improved in condition, and continued to breed with no bad result whatever to their offspring or to other stock. Some years later I witnessed the slaughter for beef of some of the original herd, and some of the offspring of the bulls out of other cows. Healed traces of disease appeared in some of the old herd, but no trace in the offspring.

For the reason, therefore, that the disease on the range is so little, if at all contagious, it may be assumed that the inauguration of any quarantine measures is entirely unnecessary. The impossibility of detecting tuberculosis in the case of large movements of cattle from one Western state to another renders the maintenance of a quarantine utterly impracticable. A physical examination will only reveal the most advanced cases, which would in most instances be cut out by the trader.

The majority of cases are impossible of detection by any outward examination, the only possible method being by the tuberculin test.

I trust I have made it clear that the range cattle owner has little to fear from this disease, the bugbear of the advanced dairyman and the sanitarian of to-day. Recollect the disease is no new thing; it has always existed and will always exist wherever cattle are domesticated and men are civilized. It is one of the results of a rapid artificiality following a natural life, and the true solution of its control will not be in vain attempts to annihilate the germ, but in the discovery and utilization of those conditions of natural life which we have up to date lost and failed to replace in our present states of domestication and higher civilization.

What inference, as to human beings, may be drawn from Dr. Gresswell's range experience? What except that the domiciling of human beings, as with the housing and domestication of cattle, has *something* to do with their degeneration! It seems to be a question of ventilation made defective either inside or outside the lungs. It clearly does not make so much difference whether the defective ventilation is *in* the lungs—lack of use—or *outside*—impure air, because of our confined or too small abodes—the result is the same as to the consequent blood dyscrasia. That is it—a poisoning of the blood through vitiated air. We can admit that other diseases—as syphilis—are perpetuated through inheritance, and that like dyscrasias in both father and mother are accentuated in the offspring, yet this vitiated air-cause of tuberculosis still holds sway, only increased in its patency by such outside helps. It is a condition precedent to the bacillus—a condition which would be nearly as potent for evil if every bacillus of tubercle in the universe were this minute blotted out of existence. Have we any proof that the same dyscrasia would not soon develop into the same tuberculosis under such an assumed state? None whatever. Then why be so concerned about the germ?

Nothing is meant to be said against the necessary precautions which all admit must be taken to protect susceptible persons

from infection by tuberculosis bacilli. We should not, however, so magnify their importance as to make us blind to other causes and conditions. It seems that the law of ventilation answers for a judgment against our civilization, defective chiefly because of insufficient breathing-space allotted to each individual, or defective also because of our ignorance of how to breathe. Tuberculosis will never be eradicated by quarantine—whatever is done with the germ—till man knows how to quarantine himself against vitiated air in his own lungs; that is, till this law of ventilation is understood and obeyed.

The increasing congestion of people in commercial centers, and the inadequacy of our habitations for man's needs are more vital questions of the hour than the mere wiping out of the bacillary results of tuberculosis.

CHARLES DENISON, M.D.

Too Many Sections.

ROCKFORD, ILL., Jan. 22, 1900.

To the Editor:—It must be apparent to those who attend the Sections of the AMERICAN MEDICAL ASSOCIATION that there are either too many Sections, or too few members to some of them. Who has not witnessed the painful spectacle of a member with a really meritorious paper, reading with listless emphasis to an audience of three or four—I have seen an audience of two—this product of his study and thought?

At Columbus, a beautiful hall had been secured for one of the Sections, but the company was so lost in this hall that it adjourned to a committee-room at a hotel, where from two to six patient and faithful members sat and listened to the papers presented, through the three days of the meeting.

Then, too, papers are not properly classified by authors or chairmen and secretaries of Sections, or else a knowledge of this attendance from previous experience induces the readers to seek Sections where *audiences are assured*. Should not a general committee, to whom titles could be submitted early enough, classify these papers so they might appear listed in the Sections to which their titles imply?

Thus, to be general, and by no means personal, for the sake of illustration; Dr. Ott's valuable paper on "The Spread of Contagious Diseases in Schools and Its Prevention" would have been expected in the Section on State Medicine, instead of in Practice of Medicine. The same with Julia W. Carpenter's paper on "Vaccination;" as also Dr. M. P. Hatfield's on "Dynamics of School Puberty;" with propriety the papers on state control of tuberculosis and those on climate and allied topics; the papers on railroad or transportation companies' responsibilities and relations to employees and patrons, should come in this class.

Forensic papers or addresses should be classed with the Section on State Medicine. This Section might well comprise psychiatry and medical jurisprudence, and papers pertaining to neurology should go in Practice of Medicine, with more exact propriety.

By placing gynecology with surgery a more normal classification would ensue, a harmony of interests would go together and the present wants of the profession be better met. Dietetics should belong to the Section on Materia Medica, Pharmacy and Therapeutics, where its efficiency as a means of treatment normally places it.

Obstetrics should go into a section with pediatrics, all obstetric papers being grouped together, and all pediatric ones the same way, so that those interested could be informed when these subjects of their liking were coming, and so could best utilize their time.

Stomatology, a Section admitted by the urgement of evolution, would lose none of its prestige if it were moved over with the Section on Otology and Laryngology; the latter having a national association of its own, the Section would not become crowded by this union.

A new section might be created, of which skiagraphy would be a part and this should embrace the subject of pathology.

It is to be anticipated that there are other coming themes in the onward march of medical progress, for which there must be a place made, and with the side-tracks to Sections now in, the main line will still hold to its right of way on the annual trip and go on with constantly accruing interest and scientific momentum.

D. LICHTY, M.D.

Dosage of Blennostasin.

NEW YORK, Jan. 22, 1900.

To the Editor:—Our attention has been called to a misprint in the third edition of "The Newer Remedies," by Prof. Virgil Coblentz, whereby the dose of blennostasin is given as from 1 to 4 grams (15 to 60 grains) instead of from 1 to 4 grains. Inasmuch as the work had been widely circulated prior to the correction, we would ask you to call the attention of the profession to the error, as the administration of so large a dose would, in all probability, cause serious complications.

Very respectfully yours,

MCKESSON & ROBBINS.

Medicine in the Far East.

CALCUTTA, INDIA, Dec. 15, 1899.

THE CHINESE AND THE JAPANESE.

One of the first things that strikes the observer on landing in China, from Japan, is the apparent difference in the physical stamina of the inhabitants of these two countries. I found by experience that this difference was not only an apparent, but a real one; for the jinriksha man of the "Flowery Kingdom" would carry me nearly twice as far in a day, without fatigue as his pig-tailed prototype across the Yellow Sea was able to do.

After my observation in China, I am inclined to look upon three factors as causative agents in the production of this result: 1. The wide-spread prevalence of malaria, which I found to affect at least one-third of all the sick Chinese I saw in the country. By this term I mean true paludal malaria, and not that false variety that so many of us call into requisition when we are puzzled to make a correct diagnosis in any given case. 2. The terribly dirty and unsanitary condition of the dwellings in which the people live. 3. The wide-spread prevalence of the opium habit among all classes of the population.

When we consider that the two races have probably sprung from a common stock, have drunk for centuries at a common source of learning, and have so much that is common in their religious belief, it is a striking phenomenon that they should be in many ways so unlike each other.

The Japanese is ever on the alert to grasp something of value to add to his stock of learning. The Chinaman, on the contrary, looks askance at everything that is offered him from abroad and views with suspicion everything that has not stamped on it the impress of antiquity. His medicine, as he practices it to-day, is as old as the Christian era. The textbooks that he uses in his common schools consist, in the main, of extracts from the writings of Confucius, or authors that lived before his time.

MEDICAL EDUCATION IN CHINA.

There is no place in the wide world where correct information on any subject whatever is so difficult to obtain as in China, and though what I shall write under the above head has been obtained with no little inquiry and observation, I am prepared to face the fact that men, who will claim to have had equal opportunities with myself, will give every assertion that I could possibly make, the flat contradiction.

Within the whole Chinese empire, with its population of 400,000,000, there are probably not at the present time 500 young men who are receiving a medical education that would be recognized as such in the Western world. Among the Chinese themselves, the practice of medicine is looked on more in the light of a trade than that of a learned profession. The true Chinese scholar who has through years of difficult study achieved a high position in the domain of letters seldom takes up the study of medicine. In fact, he looks on it as a sphere too low for a true scholar to occupy.

So the profession is recruited, in general, from men of a mediocre talent and very little education. A young man who wishes to study medicine apprentices himself to one of these practitioners and after serving an apprenticeship of three years is supposed to be fitted to launch out on his own responsibility. In his course of study, anatomy, physiology, chemistry, or pathology is never taught. The Chinese materia medica is recruited from a very large number of articles, consisting of the tissues of various species of animals, their excretions, as well as a vast array of vegetable substances. While these men know little or nothing of the real action of the remedies they use, they must study with considerable care the dosage of these

agents or their results would be often disastrous to their patients.

CHINESE THERAPEUTICS.

I visited several dispensaries attached to Chinese hospitals, and saw their prescriptions compounded and prepared for use. They were real shotgun affairs, containing from six to twenty-four different ingredients. They were all prepared in the form of a decoction, and the usual quantity of the liquid when ready for use was one pint, which was generally given at a dose during the early morning, and was not repeated again for twenty-four hours.

A complication in Chinese therapeutics arises from the fact that the physician looks on the organization of the two sexes as so different that a plan of treatment adapted to the one is not at all applicable to the other. One of the arguments used by the native doctor against our Western remedies is, that while these agents may be all proper and right for the white race, the Chinaman is so different in his organic make-up, that a plan of treatment that might be proper for the one might be disastrous for the other.

On a shelf in one of these Chinese hospital dispensaries I saw a large bottle containing half a gallon of a dark-colored fluid, in which was macerating a snake about two feet long. The doctor informed me that the liquid was red wine, and that the serpent was a variety of reptile that had wonderful medicinal virtues, and that this wine thus treated was a sovereign remedy for amenorrhea and other forms of menstrual derangements in the female.

I visited some of the hospitals run on true Chinese methods, and saw some of the best men in Shanghai and Hongkong, and the work they do. These men make their visits in the hospital wards, as well as attend to their out-door patients, at an early hour in the morning. They claim that at this time of day they can better judge of the nature of the disease with which they have to deal. An extra charge is made for all visits made to patients at their homes, before noon, as these visits are considered more valuable than if they are made in the afternoon.

With these men the pulse is the only avenue through which they attempt to gain a knowledge of the disease from which the patient is suffering. They place two or three fingers on the radial artery and often spend several minutes in studying the quality of the circulation. They ask the patient his age, occupation, and the length of time he has been sick, and with this examination they seem to be entirely satisfied.

In general, surgery forms no part of the practice of medicine with the true Chinese physician. He entirely dispenses with the use of the knife, except to occasionally open an abscess that is just ready to open itself. In the treatment of fractures, however, he possesses considerable skill, adjusting the two ends of the bones with great care, and applying his splints and bandages in a manner that would do credit to his western confrère. He never attempts any extension in the management of these cases; still, I am told by those qualified to judge that his results are generally good. In cases of severe compound fractures, or other injuries of the extremities, where we would do a primary amputation, he leaves the case to Nature, and saws the bones off after a complete line of demarcation has been formed, and the soft parts have sloughed away. The practice of obstetrics he completely ignores, leaving this branch of medicine to a set of ignorant midwives.

The fear of the knife seems to be inherent in the Chinese race. While I was in Shanghai, a Chinaman was brought into St. Luke's Hospital, with such a severe crushing injury to one of his legs that Dr. Boone considered an amputation necessary. The patient, however, after a consultation with his friends, refused to be operated on and left the hospital to be treated by a native doctor. This kind of occurrence is so frequent in China that it greatly lessens the amount of surgery done in that country. This fear of surgical operations is not caused by a lack of courage on the part of the Chinaman, or his unwillingness to endure pain, for I have often seen him unflinchingly bear the application of caustics, and the use of the thermocautery, and that too with a heroism I have never seen equalled by any other race. It is, however, his ideas as to a future state that make him look with horror on any operation that would mutilate his body. Thus by the loss of a leg or an arm in this world, he believes that down through all the innumerable mutations that he will pass after death he will be a mutilated being.

A vast majority of those who are being educated in medicine, after anything like the plan adopted in the West, are receiving their instruction in the different missionary establishments that are scattered over that vast empire. When we consider the material with which they have to do, the talent that is required to constitute a good teacher in medicine, and the want of proper appliances to illustrate the subject taught, one can readily appreciate what the results are likely to be. At St. John's College, near Shanghai, I saw a medical class of eight young men—the class is limited to this number—being taught in chemistry, materia medica, anatomy, and physiology. In this institution they have a very good set of appliances to illustrate the subjects taught. As no dissections are allowed on the human body, a French manikin, supplemented now and then by the body of a monkey, is the only means they have of teaching anatomy. These young men, before entering on this course of study, must first have graduated in the literary department of this college, and after two years of teaching in the elementary branches of their profession, are taught for another two years by Dr. Boone and Dr. Reed at St. Luke's Hospital, when they are given a degree in medicine. From what I saw of Dr. Boone's work in this hospital, I believe these men receive a very efficient, practical course there. Dr. Mary Gates has charge of the obstetric and gynecologic work in this institution, and while she is teaching several young Chinese women to practice in her department, I doubt whether the young men of this institution receive very much efficient instruction in these branches, owing to the great aversion that Chinese women have to being examined by a man.

At the college proper, I was authorized to say that this is the most thorough course given in medicine anywhere in China. Later I paid a visit to the Red Cross Hospital at Canton, and was given an epitome of their mode of teaching their medical students, comprising a class of about thirty men and six women. When I mentioned what I had seen of the teachings done at St. John's, and the claims of that institution, to the most thorough course given in medicine, anywhere in China, the Canton Hospital's doctors vehemently repudiated the claims of the Shanghai institution. By what I could glean, however, of the means that each has to illustrate its teachings, I am inclined to think that the claims of St. John's College are well founded.

At Tientsin, near Pekin, there is a medical school supported by the Chinese government, and where the faculty are mostly Americans and in which Western medicine is exclusively taught. The class consists of about thirty students, and when they graduate, they are designed for places in the army and navy. Sanitary science is a branch that is taught most thoroughly. This school is well equipped and, excepting that its students have not the advantage of dissecting the human body, in all other respects their course of study is an excellent one. The students, who make up this class are chosen by competitive examination, and as the numbers that compete for the places are very large, excellent men who are found in this.

I saw several of these Tientsin graduates, and, compared with other Chinese physicians, wherever educated, they were the best men t t I met anywhere in China. One whom I saw in Shanghai told me that when he went up for the examination to enter this school, he was one of six, and that one thousand young men competed for these places. These young men, after graduating, print on their cards, "Diplomat of the Imperial Medical College of Tientsin," and are ever after recognized as government officials. The educated Chinaman, like our politician at home, has an insatiable appetite for office. In his prayers to his gods, he never forgets to implore them to get him a position in the government service. In Canton I saw the little brick stalls where 11,000 young men were lately incarcerated for three days, undergoing an examination for positions in the government civil service. From these 11,000 applicants, however, there were only eighty-eight places to be filled. After meeting these Tientsin graduates, and observing what a superior class of men they are, intellectually, I regretted that our material at home, to fill the ranks of our profession, could not be chosen in the same manner that these men are.

SHANGHAI GENERAL HOSPITAL.

The first hospital I visited in China was the Shanghai General Hospital, an institution supported largely by the English and American municipalities, that form a union in the management of their affairs in this city. While thirty-nine out of forty of the inhabitants of Shanghai are Chinese, none of that race is admitted to this institution. This city being one of the most important commercial centers in the Far East, and this hospital receiving the sick of every nationality except the Chinese, one finds within its walls as cosmopolitan a class of invalids as it would be possible to imagine. The three physicians who have charge of it are all Scotchmen. In Dr. McLeod, the senior member of the staff, I found a most genial and hospitable man, who received me most cordially and answered my many questions with patience and politeness. In spite of the extreme unsanitary condition of this city, I found here, as in Japan, that typhoid fever is not a prevalent disease among its permanent inhabitants. I saw, however, a good many patients with this complaint in this institution, who had been infected before coming here. Among these were eight lately taken from a Japanese man-of-war. Dr. McLeod's treatment of this disease is expectant in the extreme. If constipation exists, he uses no cathartics, but enemas only, to move the bowels. If diarrhea be present, he gives a single dose of some opiate at night. Apart from this he leaves the case entirely to Nature, even ignoring digitalis, camphor, or strychnin, in cases where symptoms of great depression manifest themselves, relying on the use of milk punch to combat symptoms of circulatory depression. He claims that his results have been better under this kind of treatment than when he followed a more active one.

As in Japan, I found here also that true croupous pneumonia is a very rare disease. They have a ward connected with this hospital for the isolation of scarlet fever, and diphtheritic cases. But these diseases are so rare here that the beds in this ward are nearly always empty. While I was in Shanghai a case came up before the mixed court which illustrates the fact, that the heathen Chinese, like his more civilized brother of the Western world, is easily gulled in matters of medicine, and is an easy victim of quackery and quacks.

October 17 was the birthday of the Chinese god of medicine. On that day an enterprising druggist imported from Japan, a fine specimen of a holy deer whose tissues are supposed to be possessed of wonderful therapeutic virtues. To render this beast's body more efficacious, it is necessary to get its blood as hot as possible before it is killed. To accomplish this object an iron was bound on to its head, in such a manner as to press deeply, and put the poor beast into the most terrible agony. After hours of this torture it was strangled to death by the application of a cord around its neck. The pills made from this animal's tissues were widely advertised, and warranted to cure a hundred diseases. The thing was a grand success, but unfortunately for the druggist, he killed this poor beast within the English concession, and some member of the Society for the Prevention of Cruelty to Animals had the Chinese apothecary prosecuted. When the case was tried, the European members of the court were disposed to impose a heavy fine on the offender, but when the Chinese member of the bench explained that this was a long-established custom in China, the man was let off with only a fine of $10, after promising never to do the like again on British soil. W. S. CALDWELL, M.D.

Association News.

Affiliated Societies and the Association.—The following has been addressed to the secretaries of the different medical societies affiliated with the AMERICAN MEDICAL ASSOCIATION:

Dear Doctor:—At a regular meeting of the Committee on National Legislation of the AMERICAN MEDICAL ASSOCIATION, held Nov. 10, 1899, at Washington, D. C., I was directed to request one delegate to represent your society at the general meeting of delegates to be called by this committee, to meet in Washington, D. C., some time in January or February, 1900, to act in accordance with the resolution adopted by the AMERICAN MEDICAL ASSOCIATION at the Columbus meeting, June 7, 1899. Many of the secretaries of the societies have replied promptly, sending in the name and address of their delegate, but a few have as yet not responded. The Legislative Committee hereby respectfully requests the societies that have not furnished us with the name and address of their delegate to the proposed meeting, to do so at once, that we may call the general meeting on legislation at the earliest possible moment. The special subjects to be considered at that meeting were specially mentioned in our circular letter to the secretaries, under date of Jan. 10, 1900. You will confer a great favor by responding promptly.

Very truly yours,
H. L. E. JOHNSON, M.D., Chairman.

Deaths and Obituaries.

JOHN CARGILL SHAW, M.D., died at his home in Brooklyn, N. Y., January 23. He was born in Jamaica, West Indies, fifty years ago, was a member of the class of 1874, College of Physicians and Surgeons, N. Y., and at the time of his death was consulting neurologist of many Brooklyn institutions and a professor of nervous diseases in the Long Island College Hospital. As a writer he guarded against over-statements, and as an executive officer was eminently satisfactory, particularly as superintendent of the Kings County Insane Asylum.

JOHN WILLIAM CORRELL, M.D. died in Baltimore, Md., January 20, aged 73. He was born in Winchester, Va., and attended the medical college there and the University of Maryland. He was connected with the medical department of Jackson's C.S.A., later practiced in North Carolina, Wilmington, Del., Tarrytown, Md., and for the last twenty-five years in Baltimore and its suburbs. For three years he had been incapacitated for practice, by a complication of diseases.

ENOCH ADAMS, M.D., Litchfield, Me., died January 23, at the age of 71 years. He was a graduate of the medical department of Harvard University, class of 1851, and during the Civil War was surgeon of the 14th Maine.

MATHEW A. BOOTH, M.D., Newport, Del., died at Washington, D. C., at the age of 81 years, January 23. He was a graduate of the Winchester Medical College, Va., and during the Civil War was acting assistant-surgeon at Hammond General Hospital.

C. B. BOSHBYSHELL, M.D., Glenwood, Iowa, died January 16. The Doctor was born in Pennsylvania in 1833, and graduated from the Jefferson Medical College. During the Civil War he was assistant-surgeon of the First Iowa Volunteer Cavalry and then of the Twenty-third Iowa Infantry.

ALFRED J. WATTS, M.D. died from apoplexy, at his home in Brooklyn, N. Y., January 22. Born in England, in 1825, where he received his medical degree, he settled in Utica, N. Y., in 1848, and here he practiced his profession until about thirty-five years ago. He invented "crystal gold" for teeth filling, which proved a great financial success and induced him to give his entire time to the development of the new process.

COLUMBUS W. KRISE, M.D., University of Maryland, 1871, died at his home in Carlisle, Pa., January 23, aged 52 years. He was born in Gettysburg, Pa., and was a member of the AMERICAN MEDICAL ASSOCIATION and also of the Pennsylvania Medical Association.

A. LEWIS BOUGHNER, M.D., University of Michigan, 1885, died in Chester, Pa., January 16, aged 40 years. His death was attributed to septicemia from a finger wound received three months before.

EARNEST M. GALLION, M.D., Harriman, Tenn., aged 38 years, died near Dundridge, Tenn., January 15. He was a graduate of the medical department of the University of Louisville, class of 1889. He was one of the pioneers of Harriman, and president of the Board of Education.

C. O. MATTHEWS, M.D., Terrell, Tex., died Dec. 14, 1899, at the age of 39 years. He was a graduate of the College of Physicians and Surgeons of Baltimore, Md., class of 1884.

THOMAS H. FRANKLIN died suddenly at Atlantic City, N. J., January 9, aged 59. He was an alumnus of the University of Pennsylvania, and had seen service during the Civil War.

LYMAN RODGERS, M.D., University of Vermont, Burlington, 1858, once president of the Vermont Medical Society and a state senator, died from cardiac disease on January 22.

WILLIAM S. HOUSE, M.D., New York University, 1859, of Haverstraw, N. Y., died there January 27, aged 62 years.

We also note the following deaths:

T. F. Burke, M.D., DeWitt, Iowa, January 23, aged 45 years.

Henry Chapple, M.D., Billings, Mont., in Arizona, where he recently went for his health, aged 30 years.

Dixi Crosby, M.D., New York City, January 20, aged 31 years.

L. F. Corgan, M.D., Woodburn, Ill., January 22.

R. S. Gabbey, M.D., Rossville, Kan., January 25, aged 69 years.

A. Klein, M.D., Corryville, Ohio, January 22.

H. F. Koehler, M.D., Arcadia, Neb., January 21.

Levi H. Lawall, M.D., Bethlehem, Pa., January 24, aged 70 years.

S. F. Milner, M.D., Earl, I. T., January 16, of pneumonia.

M. L. Overton, M.D., Lorraine, N. Y., January 13.

Henry Clay Van Zandt, M.D., Schenectady, N. Y., January 16, aged 56 years.

E. E. Weston, M.D., Pittston, Pa., January 20, aged 48.

Stanley D. Wilkinson, M.D., Barnesville, Ohio, January 19, aged 31.

DEATHS ABROAD.

Advices from Rio de Janeiro, Brazil, announce the death of Dr. Domingo Freire, recently. He was born in Rio fifty years ago, held the chair of chemistry in the Government University and won an enduring reputation for his yellow fever researches.

Three prominent members of the profession in Italy have recently died at advanced ages: L. Brunetti professor of pathologic anatomy at Padua; G. Zoia, professor of anatomy at Pavia, and G. Pinto, of Rome, whose name will always be associated with the reclaiming of the Campagna. The death is also announced of A. Mooren, Düsseldorf, a pioneer in ophthalmology.

J. R. SHANNON, M.D., Goderich, Ont., died on the 18th ult., of typhoid fever, at the age of 31 years. For two years he occupied the mayor's chair, being one of the most popular occupants of that position, Goderich has seen for many years.

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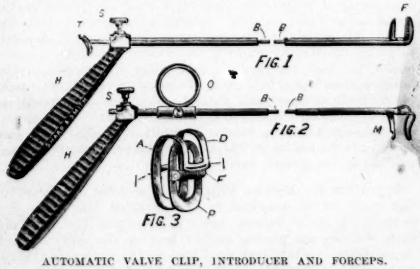
1900

New Instrument.

Automatic Valve Clip.

BY J. RAWSON PENNINGTON, M.D.
PROFESSOR OF PROCTOLOGY, CHICAGO CLINICAL SCHOOL.
CHICAGO.

This mechanical device was designed more especially for making a safe, permanent and bloodless division of annular, semi-annular and other rectal strictures and obstructions located in the middle and upper portion of the rectum. These pathologic conditions are usually built on the semilunar, rectal, or Houston's valves, and are frequently a prime factor in the etiology of chronic constipation, obstipation, intestinal obstruction, mucous discharges, etc. It may also be used for the removal of neoplasms, prolapse, etc.



AUTOMATIC VALVE CLIP, INTRODUCER AND FORCEPS.

Fig. 1 is a valve forceps; Fig. 2, I have designated as the clip introducer. Each is 25 cm. long; H is a reversible handle controlled by the set-screw, S; T is a thumb-rest connected by the slide-bar B, for opening and closing the beak F of the forceps; O is a ring connected by the slide-bar B for opening and closing the beak M of the clip introducer.

Fig. 3 is a mechanical device to be known as an automatic valve clip, and is slightly opened. It is made of spring steel, is 20 mm. long, 11 mm. wide and 8 mm. in depth. *a*, is the permanent plate; *d*, the spring; *p*, the removable plate connected to the spring *d*, by means of the fulcrum *f*; *i*, two bridge holders for opening and applying the clip. The clips are made of different sizes. To apply this mechanical device, introduce a tubular speculum into the rectum, remove the obturator, pass the forceps through the speculum and grasp the structure to be divided. The speculum is then held by an assistant, the clip attached to the introducer at M, opened and carried through the speculum to the pathologic structure, where it is carefully applied. The introducer and other instruments are then withdrawn. The clip is retained in position by means of its spring and automatic action. The section grasped by the clip is destroyed and removed by pressure atrophy.

N. B.—Since having the drawings made, I have adopted a scissors handle for the forceps and introducer.

Columbus Memorial Building.

Miscellany.

Pasteur Institutes.—Lyons has opened a Pasteur institute, the eighth in France; Russia has six; Italy, five; Austria, two. There is one in New York, Chicago, Havana, Rio Janeiro, and Buenos Ayres; also at Saragossa, Malta, Bucharest, Constantinople, Aleppo, Tiflis, and Athens. The *Gazette Méd. de Paris* observes that all of these thirty-three establishments have been founded with the consent and supervision of the pupils of Pasteur, although once started they usually become entirely independent of the mother institute in Paris.

Affections of the Ear and Life Insurance.—Coosemans stated at the congress of medical officers of life insurance companies (THE JOURNAL, xxxiii, p. 1311). that dry affections of the ears have no importance in respect to life insurance, but that a suppurative affection should exclude the candidate unless it heals with *restitutio ad integrum* and especially occlusion of the tympanic perforations. If the suppuration heals but leaves a large, dry, tympanic perforation, an extra premium should be imposed. Buys adds that sclerosis of the ear, inducing deafness, renders the candidate inferior on account of the danger of accidents to the deaf, except in exceptional cases.

Committee on District of Columbia.—For the information of those interested in the defeat of the Gallinger bill, we again mention the members of the committee to which the bill was referred, the personnel of the committee having changed. As at present constituted it is as follows: Senator James McMillan, Michigan, Chairman; Senators J. H. Gallinger, New Hampshire; H. C. Hansbrough, North Dakota; R. Redfield Proctor, Vermont; J. C. Pritchard, North Carolina; Lucien Baker, Kansas; Geo. L. Vellman, Maryland; S. R. Mallory; Florida; W. V. Sullivan, Mississippi; W. A. Clark, Montana; Thomas S. Martin, Virginia; Wm. M. Stewart, Nevada, and Richard Kenney, Delaware. Personal letters may be addressed to them or to other senators. Petitions should be addressed to the Senate of the United States.

Bill on Commissioning Assistant Surgeons U. S. A.—The following bill (H. R. 1782) has been introduced in Congress. See p. 292 for action of N. Y. Co. Med. Ass'n. concerning it:

Be it enacted by the Senate and House of Representatives of the United States of America assembled, That all acting surgeons of the United States Army who served as medical officers, agreeably to Army Regulations, either in the Civil War or the Spanish-American War or the Philippine Rebellion, and whose services were honorably terminated, and those acting assistant-surgeons of the army who are still serving as medical officers, be issued warrants by the Secretary of War as acting assistant-surgeons of the United States Army in a similar manner with the warrants issued to the acting assistant-surgeons of the United States Navy by the Secretary of the Navy, the date of their warrants to be the date of their entry into the service of the United States as medical officers and the date when their services as medical officers were or will be honorably terminated to be the date of their discharges from the service of the United States: *Provided*, That no back pay or allowance be made to any such acting assistant-surgeon by virtue of this Act.

Mechanism of the Effect of Rhythmic Tractions of the Tongue.—Laborde recently reported (at the Société de Bio-

logie, *Semaine Méd.* Dec. 27, 1899) that it is not the accession of air into the lungs that restores suspended animation but merely the re-establishment of the respiratory reflex. A tube with a stop-cock was introduced into the trachea of a dog, and the cock turned until the animal was completely asphyxiated. When the contractions of the heart and of the diaphragm had been entirely arrested, except for a slight tremulation in the auricles, perceived by radioscopy, rhythmic tractions of the tongue—without opening the cock in the tube—were sufficient to re-establish the movements of the diaphragm, and soon after of the heart, and the animal was completely restored when hematosis was restored by opening the cock in the tube. This experience fully demonstrates that the re-establishment of the respiratory reflex precedes that of the respiration proper.

Damages of Ten Thousand Dollars for Dog's Bite.—A child a little over 4 years of age was suddenly attacked, while playing with her dolls, by a large St. Bernard dog belonging to their master, that had accompanied two servant girls who had called on, and were at the time in an adjoining room engaged in conversation with, the child's mother. The was torn loose, resulting in a considerable loss of blood, and, it child was ferociously bitten on the face and on the scalp, which was claimed, permanent disfigurement. There was also evidence tending to show that four months thereafter she had spasms, which were epileptic, though there was a difference of opinion brought as to whether they were caused by the attack of the dog. A suit against the owner of the dog resulted in a verdict for $10,000, and judgment for double this amount was entered in the child's favor. But $20,000, the supreme court of Michigan thinks too much, Fye vs. Chapin, and has ordered a remittitur of $10,000 therefrom.

May Disclose What Was Ascertained Assisting Coroner.—When the homicide case of State vs. Vaughan was recently before the supreme court of Missouri for the second time, it was sought to secure a new trial on alleged error in the admission of the evidence of a physician who, at the request of the coroner, made a post-mortem examination of the deceased to ascertain if there were any other cause of death than the wound produced by the defendant on his arm. When asked by counsel for the state to give the result of the autopsy, counsel for the defendant objected, because the law required the coroner to make a record of his inquest, and because the physician could not disclose what he did while assisting the coroner, who was not a physician. The trial court promptly overruled these objections, and the supreme court holds that it was clearly right in doing so. The fact that the coroner was required to make a record, the supreme court holds, in no way affected the competency of the physician to testify to what he found on his autopsy.

Should Allege Assistance.—Under the practice in Connecticut, as perhaps in other states, the plaintiff in an action to recover for goods sold by his salesmen, or labor performed by his workmen in the ordinary manner of such business, would not be required to state in his complaint that he had employed by such agents. But, the supreme court of errors of Connecticut says, in Sayles vs. FitzGerald, physicians do not send accounts to perform professional services, such as making calls upon persons, and in an action for such services which have been rendered by another physician provided by the plaintiff suing to recover for professional services that fact should be stated in the complaint in order to fairly apprise the defendant of what is intended to be proved. And, no such fact being stated in the complaint, the court holds it error against an objection, to permit the introduction of evidence as to another physician having attended the plaintiff's patients on certain occasions during his absence. The court further holds that a physician who assisted another with an operation and testified what was a reasonable price for performing the operation and dressing the wound might, on cross-examination, after having further stated that he received his pay for his services from the attending physician, be asked as to what his own charges for such consultation and assistance were, and whether they were reasonable.

Classification of Action for Malpractice.—Is an action for alleged malpractice as for example for an alleged amputation of an arm without proper care or skill, causing great pain to be suffered and leaving the arm in a very bad condition, "an action for an injury to the person of the plaintiff?" It was so contended as one of the defenses, in the case of Menefee vs. Alexander, and that, therefore, the one-year statute of limitations of Kentucky, covering cases of the latter character barred such an action for malpractice, if not brought within that time. But the court of appeals of Kentucky does not concur in that view. It holds that the case was governed by Section 2515 of the Kentucky statutes which allows actions on implied contracts or for injuries to the rights of the plaintiff not arising on contract and not otherwise provided for, to be commenced within five years next after the cause of action accrued. It says, by way of illustration, that if a druggist should sell a man poison for a harmless medicine, the suit for damages therefor would not be an action for injury to the person, although great suffering or loss of health had resulted from it. The limitation to an action against a physician for improperly treating his patient is the same as that in a like action against an attorney, a teacher, or mechanic for negligence in the discharge of a duty assumed by them.

Sterilization of Hands.—In the *Medical Age* for Dec. 25, 1899, Keen is credited with the following concerning preparation before operations: "First the hands are thoroughly scrubbed in soap and water, after the nails have been cut, if needed. This is the most important part of the preparation. If I had the choice of soap and water, the lime and soda method we use, or potassium permanganate and oxalic acid—one of the three and no more—I should unhesitatingly choose the soap and water. After scrubbing with this the soap and water is washed off with alcohol. Then a dram or so of chlorinated lime and an equal amount of sodium carbonate is placed in the palm of one hand and moistened sufficiently to make a paste. This is rubbed thoroughly into the arms and hands, a bit of orange wood being used to introduce it around and under the nails. The hands and arms are then washed with hot sterile water and finally in bichlorid solution."

Reposition of Anterior Luxation of Humerus by Pulling on the Adducted Arm.—Riedel has been much dissatisfied with the results of operative treatment of old luxations of this kind. In one case he had to ligate the axillary artery, and in another the patient succumbed to an after-hemorrhage. In four cases resection had to be performed on account of complications and gangrene of the head. Seven were primarily resected. The functional results were not very favorable. He therefore recommends (*Cbl. f. Chir., Heilkunde*, October, 1899) a new, simple process with which he has been unfailingly successful in 150 cases. It must be applied within the first forty-eight hours, with the patient thoroughly chloroformed after a previous injection of morphin. The arm is merely pulled with a strong pull lengthwise, slanting toward the pelvis on the sound side, when the head springs spontaneously into the cavity. He explains the mechanism as the fall on the shoulder, to which the largest majority of anterior luxations are due, pushes the head out over the inner edge of the cavity. The humerus then hangs by a strip of tendon in the center, reaching from the acromion, and when the muscles are completely relaxed in narcosis, this tendon is its only support. When pulled, the humerus tends to assume a position parallel with this tendon and rotates on it, which brings the head into its normal position in the glenoid cavity.

Operation for Hallux Valgus.—A modified operation for this condition is described in the *Brooklyn Med. Jour.* for January (p. 48). Fowler makes a transfixion incision, "the knife entering the plantar surface between the great toe and its neighbor, one-half inch proximad to the metatarso-phalangeal joint and emerging on the extensor surface just external to the extensor surface of the great toe. The soft parts are divided in the line of the web. The great toe is adducted and the external lateral ligament divided, thus allowing complete inward dislocation of the toe and exposure of the enlargement on the head of the first metatarsal. A triangular-shaped piece of bone is removed, including the exostosis. The parts are restored to their normal relationship and, if necessary, the extensor tendon lengthened through a second incision at a distance

from the original one, thus avoiding any risk of infection in the tendon sheath." The procedure is essentially that devised by Fowler a number of years ago, with the exception that one transfixion incision is used and the lengthening of the tendon is done at a distance. Uniform success, both as to functional results and freedom from pain has followed in all cases that the writer has had.

Delaying Message to Doctor.—A man attacked in the evening with right oblique inguinal hernia, had a telegram sent at about 11 o'clock to a doctor about eleven miles distant, which was not delivered until about 7 o'clock the next morning, although the doctor lived within four blocks of the telegraph office, was known to the operator, had telephone communication with his office, and was within the free-delivery limits of the city. Besides, it was shown, in the action subsequently brought by the patient to recover damages from the telegraph company, that the doctor was at home, had no professional engagements, was ready to meet the call, had it been presented, and did on receipt of the message the following morning go to attend the case. The message, in addition to summoning the doctor, advised him that it was a case of rupture. The telegraph company admitted its negligence, and made no excuse therefor, but insisted that the sufferer was entitled under the contract to but 25 cents damages, being the amount paid for the services in transmitting the message. There was a jury trial, and a verdict for $1400, from which a remittitur of $50 eliminated the allowance on account of the surgical operation, though it would seem that there was evidence to have sustained this item. Now the court of appeals of Kansas affirms the judgment of the lower court; appeal of Western Union Telegraph Company vs. McCall. It being beyond controversy that damage had been suffered which was a natural and proximate result of the negligent act of the company, the court holds that the amount thereof was properly left to the good sense and sound judgment of the jury. Nor is it willing to say that the finding here was excessive. And it intimates that the allowance of the $50 referred to was legal, notwithstanding the contention that the operation was not made necessary by the company's negligence. It takes this view because it thinks that it was a question for the jury to decide whether under the evidence about the uncertainty of such cases, the delay made the operation necessary or not.

May Practice Under Diploma in Texas.—The supreme court of Texas has reversed the court of civil appeals on the question of the right of a physician who has a diploma duly recorded, but who has not had recorded a certificate from an authorized board of medical examiners, to recover for medical services rendered by him. The supreme court remarks that there is an apparent inconsistency between the provisions of the civil statutes and those of the penal code, which it says that it has found somewhat difficult to reconcile on satisfactory grounds. But, clearly, it adds, the penal code does not prohibit a physician from practicing his profession who has received a diploma from a proper college, and who has had it properly recorded. Nor is there any express prohibition in the civil statutes. And the purpose of the omission from the Revised Statutes now in force, of article 3638 of the Revised Statutes of 1879, which clearly made practicing without a certificate unlawful, the supreme court suggests, would seem to be to bring the provisions of the civil statutes in consonance with the criminal statutes upon the same subject, and to make it not unlawful for a physician having a duly-recorded diploma from a proper college to practice his profession. It also suggests that it may have been deemed wise to leave the provision standing which made it the duty of the medical boards to examine all physicians who should apply, whether with or without diplomas; for the reason that some physicians might prefer to take out certificates, rather than rely upon their diplomas to fix their status as legal practitioners. In the case before the court, of Wilson vs. Vick, to sustain his right to recover for medical services rendered by him, the physician in question averred that he was entitled to practice his profession by virtue of a regular diploma granted to him by the Vanderbilt University, of Nashville, Tenn., the said university being a university of the first class, and being a medical school recognized by the AMERICAN MEDICAL ASSOCIATION, which diploma he had caused to be duly recorded in the office of the district clerk of the county. However, this plea, the supreme court intimates, was probably not good, as against a proper objection, as it should have been averred that Vanderbilt University was chartered by the legislature of the State of Tennessee or its authority.

Reciprocity of State License.—The following resolution was adopted by the Illinois State Board of Health, Oct. 10, 1899.

Resolved, That applicants for a state certificate to practice medicine and surgery in the State of Illinois, who have been examined and licensed by other state examining boards maintaining standards not lower than those provided for in the Act to Regulate the Practice of Medicine in the State of Illinois, in force July 1, 1899, shall be granted certificates without further examination, on payment of the fees required by the Act, providing that the applicant, who must be a graduate of a medical college in good standing with this Board, shall present with his license, an affidavit from the president or secretary of the state examining board showing that the requirements of said examining board at the time of his examination were equal to those exacted by this Board under the present law, and providing further, that the said state examining board will grant licenses without examination to applicants holding certificates issued by the Illinois State Board of Health under the act now in force.

NOTE.—Under the provisions of the Act to Regulate the Practice of Medicine in the State of Illinois in force July 1, 1899, an applicant for a certificate to practice medicine and surgery in the State must present evidence of being a graduate of a medical college in good standing as may be determined by the Board, and must pass an examination in those general subjects and topics, a knowledge of which is commonly and generally required of candidates for the degree of doctor of medicine by reputable medical colleges in the United States.

No medical college will be considered in good standing after January 1, 1900, which does not require of all graduates receiving diplomas after that date, as a condition of graduation, an attendance upon four full courses of lectures in four separate years. (See also, THE JOURNAL of Nov. 11, 1899, p. 1226.)

Case to Order Physical Examination.—A day or two after a man met with an accident alleged to have been due to the negligence of the city in allowing a sidewalk to get out of repair and remain so, his wife, at his request, called on one of the aldermen, and asked him to send the city physician to treat the case at the city's expense. The city physician being absent from the city, the alderman sent another doctor in his place. The latter attended the case for some time, during which he made two or three physical examinations of his patient. Then, the latter, becoming dissatisfied with the treatment, employed another physician in this one's stead. Later, he sued the city for damages—Wanek vs. City of Winona. After he had served notice of his claim against the city, presumably, the city attorney called with the doctor who had been discharged, and demanded that the doctor be allowed to make another examination, which the man declined to permit, and the trial judge subsequently declared that he would not order a physical examination in the case, even if he considered that he had the power, which he did not. The supreme court of Minnesota holds that this denial of an application for an order requiring the plaintiff to submit to a physical examination was error. Assuming that the examinations by this doctor, in the course of his treatment, were to be considered as made at the request and in behalf of the city, still, being made before it knew what injuries he would claim in his complaint, the court makes a point of the fact that they could not have been specifically directed to ascertaining whether those particular injuries had or had not been sustained. Again, in view of the case, the developments during the intervening six months, it says, would be most valuable, if not essential, in ascertaining the severity of the injuries, and whether they were permanent. And for these reasons, it holds that the application should have been granted.

Treatment of Diseases by Light.—The Advance Sheets of Consular Reports, Dec. 29, 1899, have the following, under the above heading: Minister Swenson sends from Copenhagen, Dec. 2, 1899, a letter to a Minnesota physician in reply to in-

quiries as to the treatment of certain diseases by concentrated light rays. The letter reads:

Dr. Finsen's Light Institute was founded in 1896, for the purpose, as expressed in the articles of incorporation, of making and encouraging investigations regarding the effects of light on the living organisms, especially with the view of utilizing light rays in the field of practical medicine.

The corporation numbers among its members men of eminence and recognized authority in the medical profession, such as the professors of the University of Copenhagen in pathological anatomy, anatomy, and common pathology; and the superintendents of the leading hospitals in Copenhagen.

The institute has gained the confidence and aroused the interest of the public to such an extent that it now receives State as well as municipal aid in the way of appropriations. Its success and growth have been phenomenal. Altogether, some three hundred and fifty cases of lupus vulgaris have been treated, in all of which satisfactory results have been obtained. A large number of cases have been treated experimentally for other diseases of the skin, among them erysipelas and alopecia areata. Scarlet fever is to be experimented with. In an interview which I had with Dr. Finsen a few days ago, he told me that the light treatment as now perfected is so effective that there is reason to believe that every case of lupus vulgaris can be cured by means of it. Dr. Finsen's successful treatment of smallpox by means of red light is also very interesting and ought to be widely known.

Both sunlight and electric light can be used for medical purposes. Owing to its latitude, Denmark is not favorably situated for using sunlight; hence the institute makes nearly exclusive use of electric light. The arc lights used are each of 4000 candlepower (ordinary street arc lights are from 2000 to 4000 candlepower). Earlier experiments with this method of treatment have failed because the light used has not been powerful enough.

Dr. Finsen is also experimenting with photo-chemical baths to ascertain how far light is instrumental in supplying the skin with blood. He says that the red color of the exposed parts of the skin is caused principally by light. Heat seems to hinder, and cold to further it.

Poor Opinion of Opinion Evidence.—In Baxter vs. the Northwestern Railway Company, the finding of the jury that the plaintiff's spinal cord was permanently impaired seemingly rested on the uncorroborated opinion of one expert witness, which was inconsistent with, and demonstrated to be wrong by, undisputed facts and all the reasonable probabilities, besides being opposed by three equally competent witnesses whose evidence was in harmony with such facts and probabilities. In such a situation, the supreme court of Wisconsin holds, a verdict can not stand. It says that mere opinion evidence, at best, is to be received and scrutinized with the greatest care. It is, ordinarily, the most uncertain kind of evidence that can be produced, and falls to the ground as utterly worthless when inconsistent with undisputed facts or with reason and common sense as applied to other creditable evidence. Opinion evidence alone is not conclusive in any case. The jury must pass upon the probabilities, and unless the opinion relied on is within scope of reason and common sense, it should not be regarded at all. If that were not so, continues the court, injustice would often rule in the jury room, because, in a case like this, or any case involving a personal injury, there is no theory so preposterous but that men can be procured to support it under oath from the witness stand by expert evidence. On questions involving skill and experience in such matters, experts must be called from the necessities of the case, for want of better evidence, and when stripped of all the elements of the mere conjecture, and pretense, and partisan influence, it is invaluable, and what is left will rarely appear improbable to ordinary comprehension. It is the duty of the courts and juries to do that,—to subject expert opinions to all reasonable tests to determine their credibility. Again, the court more specifically says that, as before indicated, the case with which experts can be arrayed on each side of a controversy, especially where the human anatomy and human afflictions, their cause and probable results, are the subject of judicial inquiry, and two theories be sustained by the evidence of reputable men skilled in their calling, each theory fitting with exactness the necessities of the side on which it is advanced, is an unexplainable phenomenon which all have experienced who have had much to do with the trial of cases. It seems that if a person is called as a witness to support one side of a controversy by opinion evidence, he is quite likely to espouse such side with all the zeal of blind partisanship, to view the situation from the point of interest and necessity of that one side of the controversy with such a degree of mental concentration as to shut out of view everything not within that narrow focus, inducing a mental condition of entire incapability of giving an independent, impartial opinion, and capability only of acting in the line which the interest of the one side suggests, with as much certainty as the hypnotized follows the mental suggestion of the hypnotizer. Opinions of experts must be tested by the same methods as other evidence for the purpose of determining their credibility, keeping in view that one fact is of greater weight than any amount of conjecture. What is here said, the court adds, should not be taken as disparaging at all the legitimate use of the results of study and experience in special lines. Such results are very helpful, and in many cases absolutely necessary, in judicial search after truth. When a skilled witness can be kept within his legitimate sphere of impartiality, like a jury or a judge, his evidence will elicit the respect, which is due from all, to the results of study and experience.

In Congress.—The following bills, of interest to physicians, have been introduced in the present session of Congress: by Mr. Crowley, No. 5563 H. R., which provides for the payment of the sum of $377.50 to the two surviving children of Shubal York, late surgeon of the 54th Ill. Vols.; by Mr. Bromwell, No. 5774 H. R., which provides for the payment of medical expenses of sick officers and enlisted men of the army while absent from duty with leave or on furlough; by Mr. Shafrock, No. 6065 H. R., which provides for the erection of a monument in Washington, D. C., to the memory of the women who, during the Rebellion, attended and nursed the sick and dying soldiers of the U. S.; by Mr. Lloyd, No. 6232 H. R., which provides an amendment to Section 1320 of Chapter 4 of the Revised Statutes of the U. S., prescribing the oath of a cadet so as to prevent hazing—the amendment adds: I will abstain from the practice of hazing in any form while at the academy. Mr. Young, of Pennsylvania, introduced one (No. 6869) which provides for establishing, under the U. S. Treasury Department, a bureau of health as follows—Be it enacted by the Senate and House of Representatives of the U. S. A., in Congress assembled: that to protect the health of the public; to encourage the adoption and enforcement by states of uniform laws of health and hygiene; to encourage individual coöperation; to collect statistics of births, deaths, and preventable diseases; to furnish information having a tendency to prevent the development or propagation of disease, especially those due to inheritance; to conduct investigations having a tendency to protect the public health, the President shall, by and with the consent of the Senate, appoint a commissioner and health officer, the latter to be a qualified physician in good standing, of not less than ten years' practice. They shall receive a salary of $5000 annually. The commissioner may appoint one or more expert physicians, who must be graduates of medicine of not less than ten years' practice. They shall receive the sum of $25 per diem and traveling expenses when on duty. The commissioner shall appoint a chief and other clerks and employees needed, who shall receive such salaries as may be determined, that, in case of threatened epidemic, the President may call the surgeons-general of the army and navy and marine-hospital service, commissioner, and health officer to have charge of the subject; that the sum —— thousand dollars is hereby appropriated to carry this act into effect; that the commissioner shall formulate such rules as may be required. Mr. Young also introduced No. 7[illegible] R. providing for the purchase of certain buildings and grounds for the use of the U. S. Army Dispensary. Mr. Hull introduced No. 6379 H. R., which provides for the employment of women nurses in military hospitals of the army. Mr. McClellen, by request, introduced No. 7017 H. R., which provides for amending the statutes relating to patents relieving medical and dental practitioners from unjust burdens imposed by patentees holding patents covering methods and devices for treating human diseases, ailments, and disabilities. Senator McMillan is responsible for No. 2551 S., which provides for the establishment of an inebriate asylum in the District of Columbia, the chief executive of the asylum to be a superintendent, to be ap-

and shall, subject to the approval of the directors, engage and discharge all the employees of the asylum and determine their wages and duties. He shall be the responsible disbursing agent of the asylum, giving bond to the satisfaction of the directors, and shall be ex-officio secretary of the board. Seven citizens of the District of Columbia, of whom at least three shall be physicians engaged in practice for more than five years, shall be appointed by the President and board of directors. The judges of the police court shall in addition be ex-officio members of the said Board, which shall make all needful by-laws for the government of the asylum and for carrying out the purposes of its creation. The superintendent shall receive and keep in custody until they are cured, or discharged by order of the Board of Directors or by order of the court by which they were committed, all persons committed to him for treatment as inebriates by order of the Police Court of the District of Columbia, or by the voluntary request of the party to be committed for treatment for inebriety, said request to be in writing in such form as the directors may require. The directors may make such reasonable and just regulations as they may think best, requiring payment in case the party is shown not to be indigent and able to pay. Proceedings to commit to the asylum shall be by information in the police court, to be filed by the attorney for the District of Columbia, charging the defendant to be a habitual drunkard, said intimation to be tried as are other cases in said court. (See also, pp. 307 and 313.)

DIAGNOSIS OF AND OFFICIAL INSTRUCTIONS IN REGARD TO THE PLAGUE.

The German National Board of Health has issued a circular of instructions exclusively for physicians, which is published in full in the *Muench. Med. Woch.* of January 2. The differentiation of the first cases is of vast import. In former epidemics even prominent physicians failed to recognize it when it appeared, and diagnosed the disease as carbuncle, glandular affection, congestion of the lungs, typhus, anthrax or intermittent fever, and persisted in their error until the accumulation of similar cases, the mortality, the evident contagious character of the affection forced on them the conviction that they had some mysterious, extraordinary disease before them. It affects both sexes, young and old, and every social class, although it usually appears first and is most malignant in the homes of the poor and insufficiently fed. The outbreak of the disease proper is preceded by lassitude, depression, pains in the lumbar region, increased thirst and diminished appetite. It frequently begins quite suddenly. Stinging, burning, or dull pains at the point which corresponds then or later to the bubo, the inflammation of the glands or the pneumonia, may be the first manifestations of the disease, soon accompanied by chilliness amounting to a rigor, and consecutive fever. The latter may exist for several hours or days before the local manifestations develop. The commencement of the disease is almost invariably accompanied by a sensation of vertigo in the head, which may increase to resemble a severe intoxication, with the external indications of extreme stupor, and loss of control over the limbs, and then pass away. Nausea or vomiting frequently accompanies the vertigo. When the patient reaches the physician the clinical picture in severe cases is usually fully developed. The patient produces the impression of a drunken man: the vacant stare; the face bloated, flabby, expressionless; the extremely bloodshot eyes; the thick, stammering speech, and uncertain, staggering gait. This impression is enhanced by the abrasions and bumps caused by the stumbles and falls of the patient. The tongue looks as if it were whitewashed with lime, or occasionally red and knobby like a raspberry. The skin is dry over the entire body and burning hot, or it is merely hot on the face and trunk, while the pulseless limbs are already cold and covered with a sticky sweat. The respiration is labored, sighing; the heart-beat much accelerated; the arteries relaxed; the radial pulse dicrotic, full or already thready, near extinction, while the heart-beat is still vigorous. Put to bed, the patient lies dormant in extreme exhaustion, whispers low or talks confusedly to himself or tosses restlessly on the bed with loud delirious ravings, or if he is not prevented by the attendant or fastened to the bed, gets up and wanders restlessly about in a wild frenzy, and makes efforts to escape. With careful scrutiny it is possible to detect the local disease focus even in the first hours, and thus approach the correct diagnosis. A freshly swollen gland, or a pustule on the skin are the indications of commencing inflammation of the lungs, belong to the developed clinical picture of the plague, which can thus appear as gland plague, skin plague or lung plague. Plague of the alimentary canal has only hitherto been established in animals. The gland plague or bubo usually appears in the inguinal region, but also frequently in the axilla and in the neck, especially with children. In a few cases it has been noted on the back of the head, on the elbow, the popliteal space, the anterior or posterior ear glands, the hyoid glands, etc. Frequently the superficial glands are only slightly inflamed; the disease process seems to have jumped them and affected the deeper glands, the second or third class glands, which develop into buboes. For instance, the femoral glands may be unaffected, while a large iliac or lumbar bubo may be palpated like an appendicular tumor through the abdominal wall; or a cervical gland may be only slightly swollen, while an area of dulness in the clavicular region and symptoms of compression in the cervical organs may reveal the formation of a bubo in the upper portion of the thoracic cavity. The separate enlarged glands can be distinctly palpated in the bubo, or the inflammation of the interstitial tissue may have bound them into a thick bunch which can only be vaguely distinguished from the surrounding tissues, and is frequently surrounded by doughy edema extending far around and involving the skin. The sensibility of the bubo to pressure is usually much more than the spontaneous pain, so that the patient, by favoring the bubo by the position of the limb, experiences no pain. A small bubo is frequently not even noticed by the patient and his attendants, so that every gland that can be reached should be carefully and repeatedly investigated by the physician. Plague pustule and carbuncle are rare in comparison to the bubo. They begin with a small spot like a flea's bite anywhere on the body. The spot smarts sharply and soon develops into a larger or smaller blister with a cloudy fluid. The pustule either stops at this stage, or the subjacent tissues harden and soon become transformed into a deep carbuncle, progressing to a gangrenous ulcer. Inflamed lymph vessels frequently lead from the pustule to the nearest cluster of glands, and a bubo may then develop in them. A bubo may also develop in the vicinity of a carbuncle. Buboes, pustules and pneumonia may appear from the first, at the commencement of the disease, sometimes before the fever, or they may become evident a few hours or days afterward, seldom later than the third day. In all forms of the plague the early weakness of the heart is noticeable. In all, symptoms of irritation in the alimentary canal are evident at first, with sensitiveness to pressure in the upper abdomen and cecal region, violent vomiting, later also the passage of black fecal masses. With considerable regularity there has also been observed a slight degree of tympanitis; a soft, palpable or percussionable swelling of the spleen, and traces of nucleo-albumin and serum-albumin in the urine. Vomiting of blood or blood in the urine is rare. A diphtheritic affection of the tonsils is frequently noted early. There is almost constantly more or less conjunctivitis, which is frequently and rapidly complicated with keratitis and may lead to the complete suppuration of the eye. Punctuated or striped hemorrhages in the skin and mucous membranes have been noted with varying frequency in different epidemics. In the course of the disease the lymph vessels beneath the buboes may become involved in the inflammation, and new buboes may develop elsewhere in the body. In the treatment, a good bed, fresh air and cool baths are the most important. The intense thirst should be freely gratified. Cold water, acid drinks and milk are most relished by the patients. Alcoholic drinks are rejected by many physicians. Cleansing the digestive organs with castor-oil or some other mild purgative is recommended by many, but opinions differ in respect to cardiac stimulants. Cauterizing the pustule, rubbing in gray ointment, compresses with sublimate or carbolic acid over the inflamed glands or buboes, seem rational. Inhalations of a 1 per cent. carbolic spray can be tried in the pulmonary form. The most important protective measure for physicians and attendants is scrupulous cleanliness. The great danger of infection from the sputum and edema fluid must be constantly borne in mind. The best disinfectants are 1 per cent. sublimate; 3 per cent. carbolic acid; kresol soap and 2 per cent. chlorid of lime. Preventive vaccination is recommended. "Serum therapeutics is still on trial."

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Jan. 12 to 18, 1900:

Bailey V. Ashford, lieut. and asst.-surgeon, U. S. A., from the Department of Puerto Rico, to report by Feb. 5, 1900, for duty in the Department of California.

William J. Calvert, lieut. and asst.-surgeon, U. S. A., member of a board convened at Manila, P. I., to study tropical diseases.

Joseph J. Curry, acting asst.-surgeon, member of a board at Manila for the study of tropical diseases.

José M. Delgado, acting asst.-surgeon, from Plattsburg Barracks, N. Y., to Washington, D. C., for instructions.

Frank Du Bois, acting asst.-surgeon, from New York City, to the Department of California.

William E. Hamlin, acting asst.-surgeon, from New York City to Waltham, Mass., for annulment of contract.

Ashton B. Heyl, captain and asst.-surgeon, U. S. A., leave of absence granted to Feb. 28, 1900, at which date the acceptance of his resignation will take effect.

James M. Kennedy, captain and asst.-surgeon, U. S. A., member of a board convened at San Francisco, Cal., for the examination of officers for promotion.

Henry S. Kilbourne, major and surgeon, U. S. A., from New York City to the Norfolk navy yard, Va., on temporary duty connected with the army transport service.

William O. Owens, captain and asst.-surgeon, U. S. A., from the department of California to Fort Thomas, Ky.

Benjamin F. Pope, lieut.-col., deputy surgeon-general, U. S. A., from Columbus Barracks, Ohio, to report at San Francisco, Cal., on or before Feb. 5, 1900.

Henry I. Raymond, major and surgeon, Vols., (captain and asst.-

pointed by a board of directors, who shall be entitled to a salary of $2500 per annum, and who shall be a well-educated physician having had experience in the treatment of inebriates. He shall give his whole time to the welfare of the institution.

surgeon, U. S. A.), honorably discharged from the volunteer service upon tender of his resignation, to take effect Jan. 18, 1900.

Charles St. John, acting asst.-surgeon, from Buffalo, N. Y., to the Department of California.

John H. Stone, lieut. and asst.-surgeon, U. S. A., now at Matanzas, Cuba, is relieved from further duty at Fort Leavenworth, Kan.

Richard P. Strong, lieut. and asst.-surgeon, U. S. A., member of a board at Manila, P. I., to study tropical diseases.

William J. Wakeman, captain and asst.-surgeon, U. S. A., from Fort Thomas, Ky., to report at San Francisco, Cal., on or before Feb. 5, 1900.

ARMY MEDICAL EXAMINING BOARD IN MANILA, P. I.

A board of medical officers to consist of Lieut.-Col. Benjamin F. Pope, deputy surgeon-general, U. S. A.; Major Guy L. Edie, surgeon U. S. V. (captain and asst.-surgeon, U. S. A); Capt. William J. Wakeman, asst.-surgeon, U. S. A., and Lieut. Bailey K. Ashford, asst.-surgeon, U. S. A., has been constituted to meet in Manila, P. I., as soon as practicable, for the examination of candidates for admission to the medical corps of the army. The board will receive instructions for its guidance from the surgeon-general. It will remain in session until all the candidates who are authorized to present themselves shall have been examined. The president of the board will then report the completion of the examination of the candidates by cable to the adjutant-general of the army. Lieut.-Col. Pope, Capt. Wakeman and Lieut. Ashford will then report in person to the commanding general, Department of the Pacific and 8th Army Corps, for assignment to duty.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ended Jan. 20, 1900:

(*Changes by Cable from Asiatic Station.*)

Asst.-Surgeon D. L. Wright, detached from the *Monterey* and ordered to the *Isla du Luzon*.

Medical Director D. Dickinson, ordered to duty as a member of the naval examining board, Washington navy yard.

Medical Director G. S. Beardsley, detached from the naval retiring board, Washington navy yard, and ordered home to await orders.

Medical Inspector J. C. Wise, detached from the naval medical examining board, Washington navy yard, and ordered to duty as member of the retiring board.

Surgeon L. G. Heneberger, detached from the naval recruiting rendezvous, Detroit, Mich., and ordered to the training station, Newport, R. I.

Surgeon Oliver Diehl, detached from the *Michigan* and ordered to the naval recruiting rendezvous, Philadelphia, Pa.

P. A. Surgeon A. R. Alfred, detached from the New York navy yard and ordered to the *Texas*.

P. A. Surgeon F. W. Olcott, detached from the *Texas* and ordered to the naval recruiting rendezvous, Detroit, Mich.

P. A. Surgeon H. D. Wilson, ordered to duty on the *Michigan*.

P. A. Surgeon C. E. Riggs, detached from the naval recruiting rendezvous, New York, and ordered to the New York navy yard.

Surgeon H. N. T. Harris, ordered to temporary duty on the *Vermont* in connection with the crew of the *Albany*.

Asst.-Surgeon R. Spear, detached from the naval recruiting rendezvous, Philadelphia, Pa., and ordered to the *Constellation*, temporarily.

Asst.-Surgeon H. A. Dunn, ordered to the Naval Proving Grounds, Indian Head, Md.

Asst.-Surgeon D. H. Morgan, detached from the *Iris* and ordered home.

Medical Director G. S. Beardsley, placed on the list of retired officers of the Navy from Jan. 22, 1900.

Medical Director J. M. Flint, placed on the list of retired officers of the Navy from Feb. 7, 1900.

Pharmacist J. H. McGuigan, detached from the Naval Proving Grounds, Indian Head, Md., and ordered to the New York navy yard.

Pharmacist S. Englander, detached from the Navy Yard, New York, and ordered to the Naval Hospital, New York.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Jan. 18, 1900:

P. A. Surgeon C. P. Wertenbaker, to proceed to Greensboro, N. C., and Jessup, Ga., for special temporary duty.

Asst.-Surgeon L. L. Lumsden, relieved from duty at Seattle, Wash., and directed to proceed to the San Francisco quarantine station and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon W. W. King, to report to Surgeon L. L. Williams (Immigration Depot), New York City, for temporary duty, pending departure for Ponce, Puerto Rico.

Asst.-Surgeon F. H. Thornbury, relieved from duty at the San Francisco quarantine and directed to proceed to San Francisco, Cal., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon Carl Ramus, relieved from duty at Havana, Cuba, and directed to proceed to Fort Stanton, N. M., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon H. A. Stansfield, relieved from duty at San Francisco, Cal., and directed to proceed to Honolulu, H. I., and report to Surgeon D. A. Carmichael for duty.

Asst.-Surgeon Carroll Fox, relieved from duty at the Reedy Island quarantine station and directed to proceed to the Port Townsend quarantine station and report to the medical officer in command for duty.

Asst.-Surgeon F. E. Trotter, relieved from duty at the Tortugas quarantine station and directed to proceed to Havana, Cuba, and report to the quarantine officer for duty.

Asst.-Surgeon E. R. Edson, relieved from duty at St. Louis, Mo., and directed to proceed to the Reedy Island quarantine station and report to the medical officer in command for duty and assignment to quarters.

Acting Asst.-Surgeon John W. Stevenson granted leave of absence for 30 days from Jan. 22, 1900.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Jan. 19, 1900:

SMALLPOX—UNITED STATES.

Delaware: Wilmington, Jan. 6 to 13, 1 death.
Florida: Jacksonville, Jan. 6 to 13, 2 cases.
Georgia: Jessup, Jan. 16, 1 case.
Illinois: Cairo, Jan. 1 to 7, 5 cases, 2 deaths; Chicago, Jan. 6 to 13, 4 cases.
Louisiana: New Orleans, Jan. 6 to 13, 13 cases, 2 deaths.
Nebraska: Omaha, Jan. 6 to 13, 1 case.
New York: New York, Jan. 6 to 13, 1 case.
North Carolina: Greensburg, Jan. 15, numerous.
Ohio: Cincinnati, Jan. 5 to 12, 1 case; Cleveland, Jan. 10, 25 lent.
Oklahoma: Blackwell, Jan. 8, prevalent; Newkirk, Jan. 8, preva- cases.
South Carolina: Greenville, Jan. 6 to 13, 2 cases.
Tennessee: Columbia, Jan. 6, 24 cases.
Tennessee: Columbia, Jan. 6, 24 cases; Mount Pleasant, Jan. 6, 8 cases; Nashville, Jan. 11 to 18, 6 cases.
Texas: Houston, Dec. 31 to Jan. 6, 5 cases.
Virginia: Portsmouth, Jan. 6 to 13, 10 cases, 2 deaths.

SMALLPOX—FOREIGN.

Belgium: Antwerp, Dec. 16 to 30, 14 cases, 4 deaths.
Bohemia: Prague, Dec. 16 to 30, 10 cases, 1 death.
England: London, Dec. 16 to 30, 12 cases.
France: Lyons, Dec. 16 to 23, 2 deaths.
Germany: Königsburg, Dec. 16 to 23, 1 case.
Gibraltar: Gibraltar, Dec. 24 to 31, 1 case.
Greece: Athens, Dec. 16 to 30, 10 cases, 2 deaths.
India: Bombay, Dec. 12 to 19, 40 cases; Calcutta, Nov. 25 to Dec. 9, 9 deaths.
Japan: Yokohama, Nov. 18 to 25, 1 case.
Mexico: Chihuahua, Dec. 31 to Jan. 6, 4 deaths; Vera Cruz, Dec. 31 to Jan. 13, 3 deaths.
Russia: Moscow, Dec. 16 to 23, 7 cases: Odessa, Dec. 24 to 30, 4 cases 3 deaths: St. Petersburg, Dec. 16 to 23, 19 cases, 7 deaths; Warsaw, Dec. 9 to 23, 12 cases.
Spain: Corunna, Dec. 24 to 30, 2 cases; Madrid, Dec. 16 to 23, 14 cases.
Uruguay: Montevideo, Dec. 9, 1 case.

YELLOW FEVER—UNITED STATES.

Florida: Key West, Jan. 8, 1 case.

YELLOW FEVER—FOREIGN.

Cuba: Habana, Dec. 31 to Jan. 6, 5 deaths; Matanzas, Dec. 20, 1 case. Santiago de Cuba, Dec. 31 to Jan. 2, 2 deaths.
Mexico: Vera Cruz, Dec. 29 to Jan. 13, 3 deaths.

CHOLERA.

India: Bombay, Dec. 12 to 19, 1 death; Calcutta, Nov. 25 to Dec. 9, 74 deaths.

PLAGUE—UNITED STATES.

Hawaii: Honolulu, Jan. 1 to 16, 5 cases, 4 deaths.
Philippine Islands: Manila, Jan. 16, 5 cases.

PLAGUE—FOREIGN.

Brazil: Santos, Oct. 15, Dec. 23, 38 cases, 13 deaths.
China: Hongkong, Nov. 25 to Dec. 7, 42 cases, 42 deaths.
India: Bombay, Dec. 12 to 17, 248 deaths; Calcutta, Nov. 25 to Dec. 9, 138 deaths.
Japan: Kobe, Dec. 10 to 20, 3 deaths; Nagasaki, Dec. 9, 1 case; Osaka and Hiogo, Dec. 2 to 23, 12 cases, 9 deaths.
New Caledonia: Numea, Jan. 1 to 9, 9 cases, 5 deaths.
Portugal: Lisbon, Jan. 1, 1 case; Morau, Dec. 25, 9 cases, 7 deaths.

CHANGE OF ADDRESS.

Blue, W. R., from 2205, 3d St., to 214 W. Broadway, Louisville, Ky.
Godfrey, B. B., from Box 42, to 65 E. 10th, Holland, Mich.
Smith, J. W., from 2100 Market to Mermod Jaccard Bldg., St. Louis, Mo.
Tiffany, F. B, from 13th and Grand to 805 McGee, Kansas City, Mo.
McConathy, H. M., A. A. Surg., U. S. A., from Aibonita to Adjuntas, Porto Rico.
Houston, T. M., from Falls City, Neb., to Stanberry, Mo.
Ward, W. D., from Rochester, N. Y., to Presbyterian Hospt., Philadelphia, Pa.
Long, G. W., from Graham to Statesville, N. C.
Hannah, R. H., from Arlington to Guthrie, O. T.
Krusen, W., from 158 to 127 N. 20th, Philadelphia, Pa.
Grace, R., from Windemere Hotel to 750 Grace St., Chicago, Ill.
Peterson, W. A., from 3129 to 3046 Wentworth Ave., Chicago, Ill.
Van Derslice, J. W., from Venetian Bldg to Medinah Temple, Chicago, Ill.
Wray, J. T., from 226 to 512 Vincennes, New Albany, Ind.